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A STUDY OF BIRD MORTALITY AT NASHVILLE'S WSMV TELEVISION TOWER

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ABSTRACT

This study represents a compilation of 38 years (1960-1997) of data on migration casualty collections from the WSMV television tower in Nashville, Davidson County, Tennessee. Since 1960, approximately 20,000 dead birds of 112 species have been collected at the tower. Similar to other casualty sites across the Eastern United States, the WSMV tower has experienced massive casualty events and a long-term decline in the number of birds collected at the tower. Many reports of WSMV collections have appeared in *The Migrant* and other scientific journals through the years, but this study is the first comprehensive picture of long-term trends at the WSMV tower.

INTRODUCTION

Mass mortality of migrating birds due to collision with structures such as lighthouses, buildings and television towers is well documented (Avery et al. 1980, Hebert et al. 1995). Birds collide with these structures for a variety of reasons. The lights on towers, buildings and other structures required for aviation safety may attract disoriented birds in weather conditions that include dense cloud cover, fog or precipitation (Elkins 1988). It is thought that birds confuse these lights for stars and fly towards them (Kemper 1964) or that under conditions of poor visibility the intensity of the lights is magnified by reflection off the water in the air attracting birds to the bright light (Elkins 1988). In these situations, confused birds circle the structure and collide with guy wires, other structures in the vicinity, and other birds (Kemper 1964).

Across the Eastern United States, most large collision-related migration kills have occurred during autumn rather than spring migration (Tordoff and Mengel 1956). This may be because bird populations are at their highest following the breeding season.

The existence of the WSMV casualty dataset is primarily due to the efforts of two members of the Tennessee Ornithological Society, Amelia Laskey and Katherine Goodpasture. Mrs. Laskey began casualty collection in the 1940s at airport ceilometers. Her work played a pivotal role in bringing the mass destruction of birds to the attention of the public and gaining cooperation with the National Weather Bureau to change ceilometer operation protocols to minimize the hazard to migrating birds (Laskey 1951, 1954, 1956). Mrs. Laskey was a licensed bird bander and she coordinated collection and identification of birds at WSMV and other area towers, regularly publishing the total number and species of birds collected in *The Migrant*. Her work inspired people across the United States to investigate avian casualties at TV towers in their area (Kemper 1996).

Dr. Katherine Goodpasture was also involved with casualty collection in the Nashville area. In addition to working with Mrs. Laskey and continuing her work on tower collections, Dr. Goodpasture used the dead birds for important ornithological studies regarding skull maturation, sex ratios and wing length comparisons (Goodpasture 1963a, 1963b). Both women played an important role in teaching aspects of avian identification and taxonomy to others in the community. Their dedication, guidance, and influence on others is the reason for ongoing, consistent, and scientific monitoring of avian mortality at the WSMV tower.

METHODS

The WSMV television tower was erected in 1957 and is located at 36° 8' 28"N, 86° 51' 51"W, approximately 5 km southwest of downtown Nashville, Tennessee. The tower is 417 m tall and is positioned on Knob hill (elevation 207 m); the combined elevation of the hill and tower is 824 meters above sea level. The tower is triangular, each side measuring 3.7 meters in width, and is supported by a total of 36 guy wires attached at six different levels or tiers along the height of the tower (Figure 1). At each tier a pair of wires is connected on each of the three sides of the triangular tower; the length of guy wires ranges from 622 m to 149 m. The length of the tower is lit for aviation safety with red lights patterned so that five flashing beacons are evenly spaced between five non-flashing lights. A security fence encloses the tower and two small maintenance buildings; this region, an area of approximately 4700 m^2, is the area searched for casualties.

Volunteers, primarily members of the Nashville chapter of the Tennessee Ornithological Society, search the area under the tower every morning at 7:00 AM. Collections are made from 1 September through 31 October, dates that correspond to the period of peak migration activity in the Nashville area (Parmer 1985). Birds are collected during autumn migration only, because several years of searches during spring migration proved unproductive (Bivens pers. obs.).

Records of casualty collections note the species of birds collected by date and occasionally have additional information about the age, sex and condition of the bird (Laskey unpublished, Goodpasture unpublished, Bivens unpublished). Using these data, casualty records from 1960-1997 were compiled.

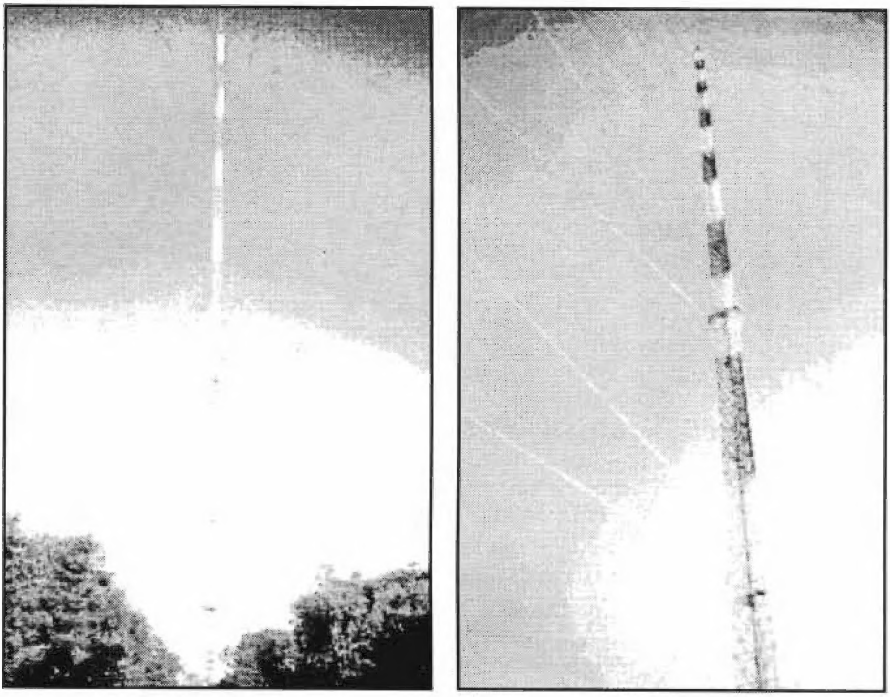

Figure 1. Photographs of the WSMV tower and supporting guy wires.
Photos by Deb Beazley

RESULTS

The total number of birds collected at the WSMV television tower from 1960-1997 (38 years) is 19,880 birds of 112 species. The number of birds collected annually at the tower has declined dramatically since collections began in 1960 (Figure 2). Along with the decline in the number of birds, the variety of species collected each year has also declined (Figure 3). Collections in the 1960s account for more than half of all birds collected at the tower, 11,808 of 19,880 birds (Figure 2).

Two unusually large casualty events occurred at the WSMV tower during the 1960-1997 time frame. The first was on 26 September 1968 when during one night 5,399 birds collided with the tower and died. The birds from this single night account for 27% of all birds collected from 1960-1997. The second massive bird fall occurred on 28 September 1970 when 3,487 birds fell in a single night. The total from this night represents 18% of all birds collected at the WSMV tower. Extremely high casualty events are well-documented in the literature and are usually associated with poor weather conditions (Elkins 1988, Johnston and Haines 1957, Tordoff and Mengel 1956, Laskey 1951, 1969, 1971).

Almost all of the birds collected at the WSMV tower are neotropical migrants. The top 20 bird species found at the tower account for 90% of all the birds found in

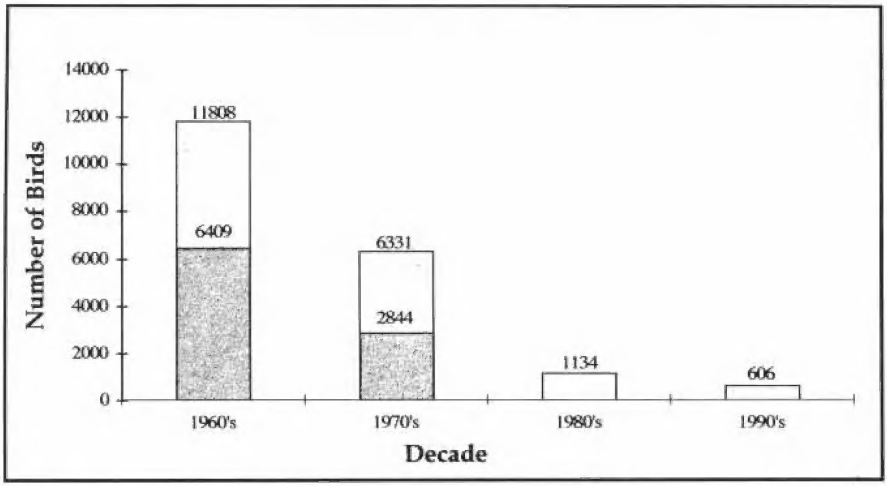

Figure 2. Total number of birds collected at the WSMV tower from 1960-1997 grouped by decade. Second totals listed in 1960s and 1970s indicate decade total minus large kill days 26 September 1968 and 28 September 1970.

Table 1. Top 20 species and numbers collected at the WSMV television tower from 1960-1997.

Rank	*Species*	*Total 1960-1997*
1	Ovenbird	4362
2	Tennessee Warbler	3579
3	Magnolia Warbler	1992
4	Red-eyed Vireo	1618
5	Black-and-white Warbler	1177
6	Chestnut-sided Warbler	953
7	Bay-breasted Warbler	855
8	American Redstart	555
9	Black-throated Green Warbler	367
10	Common Yellowthroat	357
11	Blackburnian Warbler	337
12	Gray Catbird	328
13	Yellow-breasted Chat	227
14	Philadelphia Vireo	205
15	Northern Waterthrush	203
16	Palm Warbler	192
17	Indigo Bunting	164
18	Kentucky Warbler	160
19	Rose-breasted Grosbeak	146
20	Yellow-rumped Warbler	131
	Total	**17908**

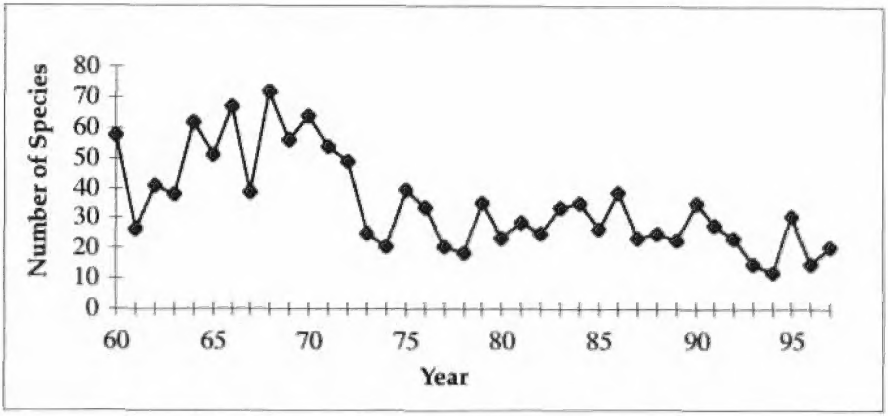

Figure 3. Total number of bird species per year collected at the WSMV tower from 1960-1997.

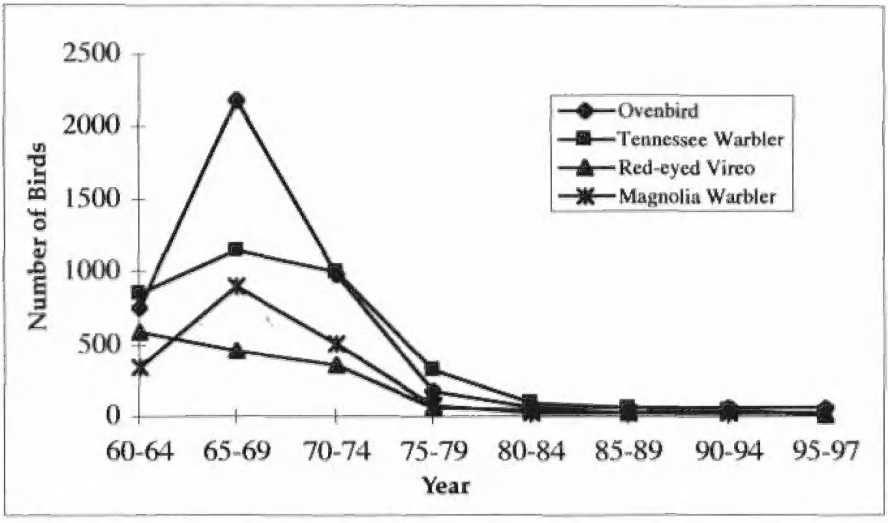

Figure 4. Trends for the top four species collected at the WSMV tower grouped in five year intervals.

the 38 year period and were all neotropical migrants (Table 1). Of the nearly 20,000 birds collected, only 128 birds (0.64%) were not neotropical migrants. The most common birds at the WSMV tower (Table 1) reflect findings at other towers; Ovenbirds (*Seiurus aurocapillus*), Tennessee Warblers (*Vermivora peregrina*), Red-eyed Vireos (*Vireo olivaceus*), and Magnolia Warblers (*Dendroica magnolia*) are frequently top species reported at casualty sites in other areas of the Eastern United States (Crawford 1974, Johnston and Haines 1957, Kemper 1996, Terres 1980). These four species alone make up 58% of all birds collected at the WSMV tower (Figure 4).

It is likely that some species of birds are more likely to hit man-made structures

during migration than others. Certain approaches to migration such as preferred flying altitudes, migratory routes or even social, gregarious migration versus solitary, reclusive migration may be different among families or between species. These differences may put some birds at greater risk than others to colliding with man made structures. While there is no obvious pattern, the long-term data at WSMV show that some species are more likely than others to be recovered at the tower. Many neotropical migrants known to pass through middle Tennessee during autumn migration are either only incidentally represented at the tower with few records or not represented at all.

DISCUSSION

The long-term picture available with these data clearly shows that the number of neotropical migrants collected at the tower has declined. This decline could be attributed to many things. A factor known to affect the number of birds recovered at a casualty site is the scavenging of dead or dying birds by predators before the tower area is searched in the morning. In a study at a Florida television tower, Crawford (1974) found that as many as 80% of dead birds experimentally placed beneath the tower at night were scavenged by the next morning. During collections at the WSMV tower it is not uncommon to see domestic dogs and cats and birds of prey around the tower in addition to finding many "feather puddles" where a bird had been plucked by a predator (Bivens and Nehring pers obs). Predators remove some birds at the WSMV tower before they can be collected. Estimating the number of birds scavenged by predators and not included in daily collections at WSMV would be an interesting and valuable future study.

The long-term decline of birds collected at the WSMV tower might be related to the growth of Nashville. Since the WSMV tower was erected in 1957 the city of Nashville has encroached on the Knob Hill area. Perhaps the increase in lights from homes, businesses, highways and streets has made the tower lights less isolated and less of an attractive force to migrating birds. Alternatively, perhaps the urban sprawl has changed migratory routes and many birds are avoiding Nashville altogether. Future research with the WSMV dataset involving a correlation between the increase of city street light installation and the decline of birds collected at the tower could be very valuable and may be extremely useful for decisions regarding the placement of new towers to minimize hazards to birds.

Television towers and other collision hazards offer a unique resource for studying migratory birds. Migration casualty data can provide many types of information. Early and late dates of migration for different species and differences in the relative times of migration by age class and sex within species have been documented from casualty records (Kemper 1996; Laskey 1962, 1967). Casualty collections have been used for important taxonomic studies such as size differences between males and females, adults and immatures; information on molts and plumages; and physiological data such as the amount of fat deposition which can be used to assess migratory condition (Goodpasture 1963a, 1963b). Additionally, long-term casualty data may reflect population trends for some species of birds (Nehring 1998).

Casualty hazards are unique avian sampling structures because they are large, stationary bird traps. These structures specifically sample migrating birds because they do not represent a hazard to resident species. In North America these structures preferentially sample neotropical migrants. At the WSMV tower 99.4% of all birds collected over 38 years were neotropical migrants. Casualty hazards sample birds independent of the bird's wintering or breeding habitat and all members of the population are sampled including males, females, adults and young, breeders and non-breeders. Identification of collected birds is done in the hand, completely independent of an observer's ability to quickly identify a bird by sight or sound.

Our landscape is dotted with these hazards and, attention should be focused on consistent collection from the most hazardous objects, primarily towers over 300 m tall. Widespread collections at casualty hazards would lend better information on the extent to which avian populations are impacted by collision with man-made objects and on the types of towers and placement of towers that impact bird populations the most. This sort of data can be used in conservation efforts to minimize construction of structures and for recommendations on the best areas to place hazardous structures. Most research and published records on this subject occurred in the 1960s and 1970s. Since then this problem has received very little attention but the hazard has not gone away. Today this is a pertinent issue because the future of television (i.e., digital television) will require the construction of many 300+ m towers in the near future (Chiles 1997).

ACKNOWLEDGMENTS

Special acknowledgements go to Amelia R. Laskey and Katherine A. Goodpasture for the many years they dedicated to this project and the inspiration they provided to others to keep it going. Special thanks to the members of the Nashville chapter of the Tennessee Ornithological Society and others who have dedicated their time to collect the birds and to WSMV for their continued cooperation. Thank you to the editor and three anonymous reviewers of the article who had many helpful comments and suggestions.

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LIMPKIN RECORD FOR HAYWOOD COUNTY, TENNESSEE

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One Limpkin (*Aramus guarauna*) was observed by at least six individuals on a number of occasions from 27 July through 18 September 1999 near the mouth of Richland Creek, a tributary of the Hatchie River near the upstream extent of the Hatchie National Wildlife Refuge, Haywood County, Tennessee. Apparently, this is the first record for the Memphis area (i.e. western Tennessee, eastern Arkansas, and northern Mississippi) and, pending approval by the Bird Records Committee, it will be the second state record for Tennessee. The first Tennessee record occurred at Radnor Lake in June 1961 (*Migrant* 32: 48-49).

The bird was observed first on 27 July at approximately 1000 CST by Alex Wyss while he was on a conservation project for The Nature Conservancy of Tennessee. Approximately 75 m upstream of the boat ramp at Big Eddy on the Hatchie National Wildlife Refuge, Wyss first observed the Limpkin on the bank of the Hatchie River. The bird seemed to be foraging along the banks of the river, under the shade of overhanging oaks (*Quercus spp.*) and other tree species. The bank was mostly bare of vegetation and at approximately a 30-degree slope. On this trip, at least three observers (Wyss and Robert Ford of The Nature Conservancy and Aaron Johnson of the U.S. Fish and Wildlife Service) were familiar with the species through observations in Florida and elsewhere. We observed the bird without optical equipment, but with the sun to our backs and under calm winds, for approximately 20 minutes, and we came as close as 10 m. The bird was larger and more deeply brown than immature night-herons which occur on the Hatchie River, and it had a long, heavy, and slightly decurved bill, which was pale yellow with a dark tip. As we approached the bird during this observation, it flicked its tail repeatedly and gave low grunts until it ran out of sight into the forest.

On 15 August 1999, Rick Light and Ford observed the Limpkin again at 0515 CST with 10 x 42 binoculars. The first observation that day was slightly before daylight, on a sandbar of the Hatchie River, approximately 200 m upriver from the last observation. We observed the Limpkin again at approximately 1030 CST, under clear and calm weather conditions with the sun to our backs. We watched it eat and drop a small mussel (species unknown). On 17 and 18 August 1999, Jeff Wilson and Mark Greene observed the Limpkin late in the day (approximately 1700 - 1830 CST). On 23 August, 8 September, and 11 September 1999, the Limpkin was heard calling and briefly observed slightly before daylight (approximately 0430-0600 CST) by Ford and Wyss in the same area. The final observation of the Limpkin was 18 September 1999 by Jeff Wilson.

We cannot be sure of the true arrival date of the bird in west Tennessee, since our first observation was the first trip to that portion of the Hatchie River in several weeks. However, we made frequent trips to this the portion of the river through

September. During this time, the Limpkin seemed to increase its time in the Porter Hole of the Hatchie National Wildlife Refuge. The Porter Hole is a large, marshy area in the backwaters of the Hatchie River dominated by cypress (*Taxodium distichum*) and large open water pools.. The Porter Hole resembles Limpkin habitat in its southeastern United States range of Florida and Georgia (Bent, Arthur C. 1963, *Life Histories of North American Marsh Birds*, Dover Books, New York, New York). We speculate that the last observation on 18 September was near the true departure date. The following week brought heavy rains and rising water, as well as cooler temperatures that may have encouraged the bird to leave west Tennessee.

DRAMA AT RANKIN BOTTOM

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Bryan K. Stevens
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A struggle for life in nature often produces a dramatic scene. Most observers of such a struggle normally cheer for the underdog. So it was 21 August 1999 at Rankin Bottom near White Pine in Cocke County, TN, about 1000. The struggle between an immature Peregrine Falcon (*Falco peregrinus*) and a Wilson's Phalarope (*Phalarope tricolor*) caught the attention of Cathi and Fred Alsop, H.P. Langridge, Charles Moore, J.B. Pectol, Bryan Stevens, Allan Trently, Gary Wallace and Frank Ward.

It was the general consensus among the observers that the falcon made about 30 attacks on the phalarope over a 15-minute period. The phalarope was swimming near shore on the other side of the lake in shallow water near a flock of Double-crested Cormorants (*Phalacrocorax auritus*). Every time the falcon reached for the phalarope, the intended victim would partially submerge for a moment or so. Again and again, the falcon would regain altitude and attack. With the sun behind us and from a considerable distance, we observed the action with various types of binoculars and scopes.

Upon reaching shore in a weakened condition, the phalarope was harassed by a Mallard (*Anas platyrhynchos*) to add to its woes. After a couple of nips from the Mallard hen, the phalarope moved out of the Mallard's immediate vicinity.

Shortly thereafter we discovered the disheveled-looking phalarope resting on shore. A Great Blue Heron (*Ardea herodias*) stalked to within one meter of the phalarope. Holding our breath, most of us expected a quick strike by the heron to end the drama, but the phalarope, dragging a damaged wing, slowly walked away from the heron.

The authors would like to thank Dr. Gary Wallace and Dr. Fred Alsop for their reading of this article.

The Migrant, 70 (1) 11-27, 1999.

THE 1998 CHRISTMAS BIRD COUNT

CHRISTOPHER J.E. WELSH

Reports were received from 26 counts conducted in Tennessee for the 1998-1999 Christmas Bird Count season. Over 2,300,000 individual birds representing 156 species were counted (Table 1). This was 2 species less than observed in 1997-1998, and 13 more than reported in the 1996-1997 Christmas Count. A relatively mild fall and early winter probably accounted for the presence of a number of species not normally found in Tennessee this late in the year. Fourteen species (plus a distinct race and color phase) were represented by only one individual; 22 species and the aforementioned race ("Oregon" Junco) and color phase ("Blue" Goose) were reported from only a single count on count day. Twenty species were found on all 26 counts.

Species of note (number of counts) included American White Pelican (1), American Bittern (1), Great Egret (2), Tundra Swan (1), Mute Swan (1), Surf Scoter (1), Osprey (2), Harlan's Red-tailed Hawk (4), Rough-legged Hawk (3), Golden Eagle (1), Peregrine Falcon (4), Virginia Rail (1), Sora (1), Spotted Sandpiper (1), Greater Yellowlegs (2), Least Sandpiper (2), Dunlin (1), Franklin's Gull (1), Eurasian Collared Dove (2); Barn, Long-eared, and Short-eared Owls (4, 1, and 2); Common Nighthawk (1), Rufous and Calliope Hummingbirds (1 each), Fish Crow (1), Black-capped Chickadee (1), Brown-headed Nuthatch (4), Sedge and Marsh Wrens (3, 4), Gray Catbird (4), White-eyed Vireo (1), five warblers (including Orange-crowned [3], Palm [8], and Common Yellowthroat [3]), LeConte's and Harris' Sparrows (2, 1), Lapland Longspur (1), Western Meadowlark (1), Baltimore Oriole (2), Red Crossbill (1), and Evening Grosbeak (1). Good numbers of waterfowl were observed on several counts. Winter finch numbers were down considerably relative to the 1997-1998 season, both in numbers of individuals and in number of counts detecting them.

The highest species total was observed on the Reelfoot count with 110 species recorded on count day (Table 1). Five additional species were found within the Reelfoot circle during count week. Memphis and Hiwassee were the only other counts to reach the 100 species threshold. Memphis had 100 species count day plus 3 count week; Hiwassee had 99 count day plus 1 count week. Six counts had 90 or more species with another 8 counts reporting 80-89 species.

Memphis had the greatest number of participants (38), followed by Nashville (32) and Chattanooga (31) (Table 1). Memphis also tallied the most party hours (119), far surpassing the next most active counts, Chattanooga and Hiwassee. The number of species observed on the Reelfoot count are particularly notable given the effort expended relative to other counts (10 participants, 46.5 party hours). Hiwassee was the only count to include birding by boat as part of their effort. Eighteen of the 26 counts spent at least some time owling.

1998 Christmas Count

Species	Fayt	Memp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hlwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	# of Cts.
Common Loon	-	-	3	-	4	-	1	-	-	-	48	-	-	5	-	50	1	2	-	2	-	3	4	12	-	-	135	12
Pied-billed Grebe	4	50	53	18	41	12	-	21	10	4	66	-	7	230	3	55	10	75	-	3	8	39	17	29	2	-	757	22
Horned Grebe	-	-	11	-	26	-	-	-	-	1	30	-	-	3	-	39	5	10	-	-	-	2	-	15	-	-	142	10
Amer. White Pelican	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Dbl-crest. Cormorant	-	162	433	-	7	2	1	1	-	-	-	-	-	31	-	4	204	12	-	-	-	14	-	-	-	-	871	11
American Bittern	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Great Blue Heron	4	58	79	25	58	89	22	33	38	20	105	1	11	70	19	104	153	60	-	26	18	15	16	21	1	3	1049	25
Great Egret	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	6	2
Blk-cwn. Night-Heron	-	-	1	-	-	-	-	-	-	-	6	-	-	-	-	-	-	3	-	-	-	14	-	1	-	-	25	5
Tundra Swan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1
Mute Swan	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1
G. White-front. Goose	-	-	1214	cw	-	6	-	-	-	-	-	-	-	-	cw	-	2	-	-	-	-	-	-	-	-	-	1222	5
Snow Goose (blue)	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Snow Goose (white)	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1
Snow Goose (unspec)	-	-	1	-	4	-	-	3	-	1	-	-	-	-	1	5	-	-	-	-	-	-	-	-	-	-	15	6
Ross' Goose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	cw	-	-	-	-	-	-	-	-	-	-	-	cw	1
Canada Goose	18	279	5325	38	63	4269	239	297	70	234	545	17	337	55	387	746	291	163	-	191	220	593	173	552	-	1	15103	24
Wood Duck	10	46	6	21	1	9	-	3	1	-	-	8	-	3	28	4	8	24	2	4	-	2	-	4	-	1	185	19
Green-winged Teal	-	4	43	1	-	321	2	76	-	-	1	-	-	-	2	32	128	24	-	15	61	2	-	2	-	1	715	16
Amer. Black Duck	-	-	4	-	-	337	4	20	2	9	-	-	-	3	3	1	285	29	-	2	33	7	-	18	4	9	770	17
Mallard	62	521	59324	194	24	6477	61	199	160	95	249	-	127	98	50	488	4158	484	-	148	105	498	232	500	2	59	74315	24
Northern Pintail	-	cw	24	-	-	122	2	-	-	-	-	-	-	-	-	6	233	2	-	2	3	-	-	-	-	-	394	9
Blue-winged Teal	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	12	3
Northern Shoveler	-	82	82	85	-	20	-	13	-	6	68	-	42	-	-	6	12	7	-	-	1	1	-	-	-	-	425	13
Gadwall	32	650	256	cw	48	318	6	404	10	39	241	-	19	228	18	107	632	85	-	-	52	47	-	40	-	-	3232	20
American Wigeon	-	4	384	cw	2	508	-	59	5	-	14	-	-	-	-	10	324	2	-	-	-	4	-	97	-	-	1413	13
Canvasback	-	2	1	2	-	4	-	15	-	14	2	-	8	-	-	-	13	-	-	-	-	-	-	-	-	-	61	9
Redhead	-	-	2	-	-	-	-	-	-	-	2	-	-	30	-	-	-	-	-	-	-	-	-	2	-	-	36	4

Species	Fayt	Memp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	# of Cts.
Ring-necked Duck	6	151	80	54	2	8	1	85	3	19	5	-	30	48	10	1	34	40	-	22	19	120	25	62	-	-	825	22
Greater Scaup	-	4	3	-	1	-	-	-	-	-	-	-	-	11	-	2	-	-	-	-	cw	-	-	-	-	-	21	6
Lesser Scaup	8	584	631	26	79	22	cw	2	-	42	18	-	-	97	-	5	3	12	-	2	-	51	-	3	-	-	1585	17
Scaup sp.	-	-	490	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	492	2
Surf Scoter	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Common Goldeneye	-	-	-	1	18	2	cw	-	-	-	18	-	-	10	-	58	1	-	-	-	-	cw	-	-	-	-	108	9
Bufflehead	-	5	74	30	3	-	-	2	-	30	32	-	1	32	6	16	73	11	-	-	-	13	177	299	23	-	827	17
Hooded Merganser	-	33	24	40	-	40	-	22	-	-	11	-	3	5	80	45	176	33	-	-	-	19	15	238	13	1	798	17
Red-breast. Merganser	-	-	10	-	2	6	-	-	-	-	2	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	26	3
Ruddy Duck	-	46	7816	2	-	16	-	8	-	3	15	-	5	48	9	1	-	-	-	2	-	-	-	1	-	-	7972	13
Duck sp.	-	-	-	-	26	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	2
Black Vulture	5	-	cw	cw	30	14	6	103	20	100	12	30	-	32	2	69	224	-	-	-	11	33	1	15	-	-	707	19
Turkey Vulture	20	-	cw	17	90	57	265	17	16	82	1	-	7	10	19	215	41	6	-	-	35	19	5	17	-	1	940	21
Vulture sp.	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-	-	-	-	-	65	1
Osprey	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2
Bald Eagle (total)	-	-	60	-	2	4	-	-	2	-	-	-	-	7	-	7	20	-	-	-	-	-	-	1	-	-	103	8
Bald eagle (adult)	-	-	41	-	1	4	-	-	-	-	-	-	-	6	-	4	11	-	-	-	-	-	-	-	-	-	67	6
Bald eagle (imm)	-	-	19	-	1	-	-	-	-	-	-	-	-	1	-	3	9	-	-	-	-	-	-	-	-	-	33	5
Northern Harrier	10	9	5	2	11	5	20	7	3	3	-	-	1	2	-	-	3	1	-	-	cw	-	-	1	-	-	83	16
Sharp-shinned Hawk	-	4	2	1	5	3	2	4	3	2	3	-	1	2	1	3	6	2	-	2	2	1	2	2	1	1	55	23
Cooper's Hawk	-	7	2	cw	3	2	4	3	-	3	7	1	2	1	4	7	2	4	-	1	2	3	2	4	-	2	66	22
Accipiter sp.	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3	3
Red-shoulder. Hawk	-	5	10	5	9	8	2	1	7	1	3	-	-	7	7	18	27	2	-	8	-	-	1	1	2	2	126	20
Red-tailed Hawk	37	85	38	39	27	24	22	30	35	40	29	9	11	27	19	40	44	11	1	5	11	15	4	30	7	4	644	26
Harlan Red-tail.Hawk	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	4	4
Rough-legged Hawk	-	-	-	cw	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3
Buteo sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1
Golden Eagle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	1

1998 Christmas Count

Species	Fayt	Memp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	#of Cts.
American Kestrel	7	50	28	33	7	-	42	33	21	29	21	6	20	6	63	12	22	8	1	8	36	30	16	30	-	6	535	24
Merlin	-	-	1	-	-	-	2	-	-	-	1	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	7	5
Peregrine Falcon	-	cw	cw	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	3	4
Hawk sp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	1
Ruffed Grouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9	1	-	11	3
Wild Turkey	-	-	55	-	7	277	52	37	56	35	-	25	-	-	-	14	3	-	-	12	40	15	18	17	-	12	675	16
Northern Bobwhite	18	3	-	-	-	28	1	-	34	24	3	-	-	-	9	-	-	-	-	9	-	-	-	1	-	-	130	10
Virginia Rail	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1
Sora	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
American Coot	-	93	865	2	277	130	-	130	16	48	229	-	224	2871	3	197	253	165	-	22	13	321	26	158	-	-	6043	20
Sandhill Crane	-	-	-	-	3	-	-	-	-	-	-	-	37	-	-	12	6309	1	-	-	-	-	-	-	-	-	6362	5
Killdeer	40	155	51	32	97	10	38	51	75	75	41	1	18	132	132	156	654	86	1	36	14	112	14	18	14	2	2055	26
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1
Greater Yellowlegs	-	cw	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
Least Sandpiper	-	461	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	463	2
Dunlin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	20	1
Dowitcher sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	10	1
Common Snipe	1	17	53	1	9	13	14	10	5	-	4	-	-	6	1	23	93	-	5	9	3	2	-	4	-	2	275	20
American Woodcock	-	3	cw	cw	1	-	3	9	-	-	1	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	22	8
Franklin's Gull	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Bonaparte's Gull	-	34	292	-	5	-	-	-	-	-	26	-	-	54	cw	95	408	72	-	5	-	37	-	-	-	-	1028	11
Ring-billed Gull	-	232	1065	3	226	581	-	1	16	6	3312	103	6	630	cw	3566	1590	2161	-	1	1	345	1	236	-	3	14085	22
Herring Gull	-	-	2	-	2	3	-	-	-	-	5	-	-	5	-	4	10	6	-	-	-	1	2	1	-	-	41	11
Gull sp.	-	-	-	-	-	-	-	-	7	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	8	2
Rock Dove	-	1578	41	494	213	-	21	257	36	477	307	34	55	162	291	2256	24	537	33	287	140	192	354	238	14	-	8041	23
Eurasian Collar. Dove	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3	2
Mourning Dove	83	1173	319	494	92	52	222	75	488	100	236	45	69	85	263	859	344	213	52	190	328	102	190	708	76	126	6984	26
Barn Owl	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	1	-	-	9	4

Species	Fayt	Memp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	# of Cts.
E. Screech-Owl	-	-	cw	-	5	2	2	8	-	-	2	-	1	4	4	8	8	-	1	2	-	1	9	24	3	2	86	18
Great Horned Owl	1	2	6	1	5	-	2	6	2	5	4	-	-	-	1	5	4	cw	-	-	1	4	3	10	-	-	62	18
Barred Owl	1	1	8	2	2	-	-	5	2	1	1	-	-	1	1	-	2	1	2	1	-	-	-	1	3	-	35	17
Long-eared Owl	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Short-eared Owl	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2
Common Nighthawk	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Rufous Hummingbird	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
CalliopeHummingbird	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Belted Kingfisher	2	26	10	4	2	7	9	9	14	22	13	2	2	14	8	23	66	11	-	8	12	16	20	22	9	2	333	25
Red-head.Woodpecker	7	8	4	2	3	8	5	3	1	-	-	-	-	1	2	4	-	-	2	cw	-	-	-	-	-	-	50	14
Red-bell.Woodpecker	83	153	34	27	22	16	42	46	72	82	17	7	7	20	37	44	65	36	6	32	20	27	14	30	1	6	946	26
Ylw-bell. Sapsucker	11	38	13	3	10	4	5	4	9	24	12	1	3	8	6	15	31	15	11	18	cw	2	10	3	-	3	259	25
Downy Woodpecker	29	109	28	12	21	9	28	34	60	56	29	4	2	18	20	46	47	33	13	31	16	27	24	45	4	14	759	26
Hairy Woodpecker	5	14	2	2	4	-	9	6	6	10	3	2	-	3	4	3	5	1	5	10	-	1	4	12	2	2	115	23
Northern Flicker	49	184	129	65	52	20	37	39	82	61	49	4	8	23	31	26	91	32	6	33	12	7	19	16	2	2	1079	26
Pileated Woodpecker	7	24	7	2	7	4	16	7	17	23	4	-	1	8	16	5	7	1	11	15	1	3	20	18	2	4	230	25
Woodpecker sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	1
Eastern Phoebe	5	11	6	1	25	11	18	4	6	5	-	-	4	13	7	6	27	6	4	4	5	3	8	19	9	11	218	24
Horned Lark	35	213	553	16	41	-	55	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	990	8
Blue Jay	305	601	71	355	97	108	152	57	322	94	98	53	107	98	182	140	185	156	20	151	69	93	72	139	51	42	3818	26
American Crow	165	200	111	42812	274	218	359	123	325	360	279	46	187	1371	395	1082	1507	694	140	260	335	297	516	1015	192	769	54032	26
Fish Crow	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1
Common Raven	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	2	1	1	22	9	40	6
Black-cap. Chickadee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	-	-	-	-	-	-	-	79	1
Carolina Chickadee	41	267	107	27	29	34	100	63	199	238	105	18	19	84	91	223	215	223	68	197	46	94	120	141	41	32	2822	26
Tufted Titmouse	25	103	37	34	39	33	95	69	152	166	60	16	44	51	110	175	172	126	38	144	45	50	57	101	19	36	1997	26
Red-breast. Nuthatch	-	3	1	-	2	-	-	-	-	-	-	-	-	-	cw	-	-	1	30	-	-	-	1	-	10	-	48	8
White-breast. Nuthatch	4	1	27	6	10	2	44	13	60	72	5	1	1	13	28	22	32	19	26	54	7	14	21	52	7	6	547	26

1998 Christmas Count

Species	Fayt	Mcmp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	# of Cts.
Brown-head. Nuthatch	-	-	-	-	4	-	-	-	-	-	-	-	-	1	-	8	34	-	-	-	-	-	-	-	-	-	47	4
Brown Creeper	3	14	7	3	4	2	5	5	4	5	4	-	-	3	1	-	5	2	6	2	1	-	3	4	2	-	85	21
Carolina Wren	26	236	57	27	37	9	75	50	142	134	41	5	5	35	88	130	88	94	16	86	24	63	86	110	15	23	1702	26
House Wren	1	3	3	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	1	1	-	-	12	8
Winter Wren	7	34	9	5	6	2	7	1	1	10	3	-	-	9	6	5	8	5	7	10	3	3	18	23	9	4	195	24
Sedge Wren	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Marsh Wren	-	-	4	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	9	4
Gold-crown. Kinglet	30	78	383	16	14	3	29	6	12	35	46	-	-	25	58	23	118	58	97	95	4	38	71	97	29	22	1387	24
Ruby-crown. Kinglet	13	70	585	6	27	2	9	6	13	14	10	-	2	24	2	53	112	14	3	33	2	4	6	15	1	1	1027	25
Eastern Bluebird	-	76	79	76	164	19	238	102	188	216	125	16	77	61	233	136	336	143	24	84	87	149	47	193	11	50	2930	25
Hermit Thrush	20	23	23	6	18	8	14	17	3	14	8	-	-	13	7	15	38	8	5	11	cw	cw	6	9	1	5	272	24
American Robin	134	804	323	493	369	8	288	906	355	436	1731	72	363	494	147	386	1179	231	4	13	32	62	215	265	3	45	9358	26
Gray Catbird	-	-	-	-	-	-	-	-	1	1	-	-	-	1	cw	-	-	-	-	-	-	-	-	-	-	-	3	4
N. Mockingbird	44	245	26	53	41	7	57	78	148	84	75	8	14	28	59	82	88	107	3	37	32	45	24	112	5	9	1511	26
Brown Thrasher	12	40	4	7	3	1	5	1	13	4	3	-	1	8	1	12	11	-	1	8	-	-	1	1	-	1	138	21
American Pipit	-	4	15	18	110	-	152	-	-	-	-	-	4	80	5	-	70	18	-	-	-	cw	-	100	-	-	576	12
Cedar Waxwing	-	5	7	2	6	32	72	15	42	27	2	-	-	211	-	102	284	23	-	-	-	3	1	19	-	-	853	17
Loggerhead Shrike	29	4	7	1	-	-	28	6	3	2	-	-	1	-	2	1	4	-	-	-	1	1	-	2	-	-	92	15
European Starling	300	3964	16195	1196	1807	1351	1188	7800	3169	3453	2434	112	851	912	6000	4380	836	820	36	221	5016	955	1828	3348	115	330	68617	26
White-eyed Vireo	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Org-crown. Warbler	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	4	3
Yellow-rump. Warbler	9	217	135	14	208	4	38	24	29	57	63	-	6	38	82	116	345	130	-	186	59	245	121	47		2	2175	23
Pine Warbler	6	4	-	5	12	-	2	1	2	-	-	-	-	1	-	5	24	1	1	-	cw	1	-	-	-	-	65	14
Prairie Warbler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	cw	-	-	-	-	-	-	-	-	-	-	-	cw	1
Palm Warbler	-	10	-	1	-	-	-	-	-	-	1	-	-	-	3	3	4	-	-	9	6	-	-	-	-	-	37	8
Comm.Yellowthroat	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3	3
Northern Cardinal	293	686	329	332	135	287	318	138	678	471	251	18	128	122	207	320	315	385	25	229	111	85	134	205	26	111	6339	26
Eastern Towhee	57	77	2	20	21	14	56	33	122	70	-	4	2	35	40	91	56	51	5	51	4	11	18	19	33	3	895	25

Species	Fayt	Memp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Bris	Roan	ShVal	Total Ind.	# of Cts.
Amer. Tree Sparrow	1	2	3	-	-	1	-	18	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	47	7
Chipping Sparrow	55	29	1	11	48	-	2	-	1	2	1	-	-	8	cw	95	88	1	-	-	-	-	3	12	-	-	357	16
Field Sparrow	99	159	21	72	97	17	243	73	101	98	127	9	108	126	76	151	207	146	-	14	16	51	39	51	13	26	2140	25
Vesper Sparrow	-	5	-	-	34	25	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	65	4
Savannah Sparrow	67	77	20	4	735	6	21	11	51	-	18	-	-	8	1	20	18	12	-	23	5	-	1	-	-	6	1104	19
LeConte's Sparrow	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2
Fox Sparrow	15	24	14	2	5	3	13	3	5	3	5	1	6	1	7	5	14	-	3	1	2	-	2	4	26	1	165	24
Song Sparrow	246	495	210	89	230	130	179	44	252	119	96	1	11	98	224	299	397	173	44	225	73	109	215	201	93	138	4391	26
Swamp Sparrow	74	146	187	54	212	44	24	55	56	20	80	-	-	7	40	120	62	7	5	17	5	8	2	6	4	16	1251	24
White-throat.Sparrow	893	1107	232	307	207	289	513	171	503	475	174	4	86	182	170	367	433	457	16	422	81	192	248	238	82	68	7917	26
White-crown.Sparrow	19	233	13	9	-	2	66	59	18	1	22	6	-	21	17	-	2	4	-	34	32	5	15	92	-	1	671	21
Harris' Sparrow	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Dk-eyed Junco (Or.)	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Dk-eyed Junco (slate)	817	484	391	193	584	553	387	63	485	160	79	18	62	191	125	115	162	49	210	80	7	41	185	268	396	388	6493	26
Sparrow spp.	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	1
Lapland Longspur	-	-	520	cw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	520	2
Red-w. Blackbird	1188	1002032	63075	302650	2598	611	380	23	352	83	560	500	-	86	215	197	219	21	-	43	-	-	-	-	14	8	1374835	20
E. Meadowlark	193	202	142	33	204	77	260	24	71	14	26	7	8	44	116	86	98	57	-	42	46	9	3	14	-	23	1799	24
W. Meadowlark	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Rusty Blackbird	58	265	62	4	275	-	9	2	-	-	-	-	-	200	4	-	120	-	-	-	cw	-	-	29	-	-	1028	12
Brewer's Blackbird	15	-	2	46	50	-	20	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	144	6
Common Grackle	560	7950	5061	12995	5362	370	79	651	99	449	78	1000	4200	6	20800	495	2	-	-	-	2	-	-	3	-	2	60164	20
Brown-head.Cowbird	62	717	5001	1178	276	-	268	45	9	3	20	25	10	-	215	24	10	-	-	-	1	-	-	-	-	-	7864	16
Blackbird sp.	-	-	500000	700	-	-	200	-	-	-	-	-	-	-	10000	-	-	-	-	-	-	-	-	-	-	-	510900	4
Baltimore Oriole	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	2
Purple Finch	-	-	-	3	-	-	1	2	1	1	-	-	-	-	-	2	cw	1	-	-	-	-	-	-	-	-	11	8
House Finch	47	227	15	26	6	-	10	39	184	212	109	72	39	29	116	186	101	66	-	25	70	55	72	155	3	20	1884	24

1998 Christmas Count

Species	Fayt	Mtmp	Reel	Jack	Sav	CCNWR	BuffR	Colum	Clark	Nash	HickP	Murf	Warr	Nick	Cooke	Chatt	Hiwas	Knox	GSMNP	Norris	Green	Kpt	Eliz	Brks	Roan	ShVal	Total Ind.	# of Cts.
Red Crossbill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	159	-	-	-	-	-	-	-	159	1
Pine Siskin	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	2	-	1	-	4	-	47	6
Amer.Goldfinch	8	144	75	26	75	35	76	24	155	106	127	15	55	171	85	86	207	143	74	90	84	112	117	182	252	55	2579	26
Evening Grosbeak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	1
House Sparrow	35	272	151	21	22	11	164	23	104	15	133	22	8	19	51	111	64	53	-	29	7	10	28	43	41	61	1498	25
Count day species	70	100	110	82	97	83	81	89	78	79	88	44	60	89	79	95	99	84	48	70	65	74	71	89	52	61	155	
Count week species	-	3	5	8	-	-	2	-	-	-	-	-	-	-	8	-	1	1	-	1	6	3	-	-	-	-	1	
Total species	70	103	115	90	97	83	83	89	78	79	88	44	60	89	87	95	100	85	48	71	71	77	71	89	52	61	156	
Total indiv.	6581	1029738	673820	365757	16188	18212	7538	12699	9862	9558	12856	2351	7550	10086	41584	19399	25487	8993	1344	4096	7546	5571	5728	10981	1715	2596	2317836	
Effort:																												
# of participants	8	38	10	8	7	9	14	9	22	32	15	3	4	15	15	31	24	21	14	16	16	8	17	20	6	6	380	
# of parties	4	10	5	5	4	5	5	6	7	9	5	2	2	6	6	12	9	10	6	7	8	5	6	6	2	4	152	
Party hours	34.5	119	46.5	40.5	35.25	39	52.5	40	60	61	52.5	3.5	19	49	55	86.75	75	56.75	40	38	30	41	44.5	57.5	19.5	32.25	1214	
Hours on foot	8.5	75	21	20.5	12.25	6	18	12.5	32	30.5	22.5	-	3	25.25		40.5	34	37.25	35.5	25.5	10	24	27	34	11.5	-	357.75	
Hours in car	26	44	25.5	20	23	53	34.5	27.5	28	30.5	30	-	16	23.75	-	46.25	27	19.5	4.5	12.5	20	17	17.5	23.5	8	-	551.5	
Hours in boat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	11	
Party miles	242.2	195	328.5	391.5	244.1	271	295	349	391	305	275	62	147.5	292.4	447	593.4	392	277	127	223	282.5	242	259	409	106	198	7101.9	
Miles on foot	8	63	10	12.5	11.5	4.5	12	15	26	26.5	10	-	0.5	14.3	-	33	28.5	29	43	18	6.5	11	12	13	12	9	420.8	
Miles by car	234.2	132	318.5	379	232.6	266.5	283	334	365	278.5	265	-	147	278.1	-	560.4	313	248	84	205	276	238	247	396	93	189	6128.6	
Miles by boat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	-	-	-	-	-	-	-	-	-	57	
Feeder participants	-	1	-	-	-	-	0	2	6	8	-	4	-	-	-	-	-	-	-	-	1	-	-	-	-	-	22	
Feeder parties	-	-	-	-	-	-	-	-	-	8	1	4	-	-	-	-	-	-	-	-	1	-	-	-	-	-	14	
Feeder hours	-	-	-	-	-	-	-	8	36	15	8	17	-	-	-	-	-	-	-	-	12	-	-	-	-	-	96	
Hours owling	-	1	1	-	2.25	-	1.5	4	1	-	2	-	1	5.3	6.25	11.5	5	-	-	2.5	-	2	2.5	3	1.5	2.75	38.25	
Miles owling	-	2	10	-	25.7	-	7	17	5	-	10	-	-	77.8	73	112	57	-	-	1.5	-	10	11	47	2	34	504	

cw = count week. Indicates species was seen during count week (3 days before or after the count but not on count day).

INFORMATION ON THE COUNTS

BRISTOL: 27 Dec. 1998; 0730-1730. Weather: cloudy; wind S 5 mph; temp. 25-47°F; open water. Twenty observers in 6 parties covered 409 miles in 57.5 hours. 89 species; 10,981 individuals. Participants: Rob Biller, Ron Carrico, Wallace Coffey, JoAnne Detta, Sarah Garret; Bert, Ken, and Loraine Hale; Ron Harrington, Marty Huber, Andy Jones, Rick Knight, Geoff Larsen, Phillip Lewis, Richard Lewis (compiler: 407 V.I. Ranch Road, Bristol, TN 37620), Amanda and Janice Martin, Larry McDaniel, Van Remsen, John Shumate, and Dave Worley. The species count of 89 was a record high for Bristol, easily surpassing the old high count of 83. Record high numbers were recorded for 20 species. Highlights included the Black-crowned Night-Heron (first record), Wood Duck, American Green-winged Teal, Redhead, Lesser Scaup, Bald Eagle, Northern Harrier, Red-shouldered Hawk, Herring Gull, Barn Owl, Barred Owl, Horned Lark, House Wren, Brown Thrasher, American Pipit, American Tree Sparrow, Chipping Sparrow, Fox Sparrow, and Rusty Blackbird. Winter Wren, normally represented by only a few individuals, turned out in force this year with 23 recorded.

BUFFALO RIVER (35° 18' N, 87° 28'W): 29 Dec. 1998; 0630-1700. Weather: cloudy with light rain in afternoon; wind NW 5-15 mph; temp. 41-42°F; open water. Fourteen observers in 5 parties put in 52.5 party hours and covered 295 party miles. In addition, 1.5 hours and 7 miles effort went into owling. 81 species (+2 count week); 7538 individuals. Participants: Michael Beuerlein, Chester and Dorothy McConnell, Royce Neidert, Muriel Ross, Ann and Mike Sanders, Donette Sellers, Don Simbeck (compiler: 424 Riddle Lane, Loretto, TN 38469), Levi Townsend; Alex, Becky, Morris, and Rita Williams. The 83 species recorded was 6 more than last year with highlights being Double-crested Cormorant, 2 Merlins, 152 American Pipits, 28 Loggerhead Shrikes, and a Harris' Sparrow.

CHATTANOOGA (35° 06' N, 85° 14'W): 19 Dec. 1998; 0530-1730. Weather: wind N 0-5 mph; temp. 40-53°F; open water; no snow; heavy rain in the morning, overcast in the afternoon. Thirty-one observers in 12 parties put in 87 party hours and covered 593 party miles. In addition, 11.5 hours and 112 miles effort went into owling. 95 species; 19,399 individuals. Participants: Maria Blair, Mary Lynn Buttram, Kevin Calhoon, Carl and Janice Chadwell, Jack Colcolough, Danny Gaddy, William Haley, John Henderson (compiler: 7323 Fairington Circle, Hixson, TN 37343), Dan Jacobson, Al Jenkins, Bonnie and Dawn Johnson, Tanya Jordan, Michael Kent, Jonnie Sue Lyons, Barbara and Mike McMahan, Peter Robinson, Rebecca and Robin Rudd, Debbie and Roi Shannon, Sandy Smith, John Whitaker; Blake, Cynthia, and Jimmy Wilkerson; Dan Williams, Hayden Wilson, and Libby Wolfe. Highlights included Snow Geese, Ruddy Duck, Peregrine Falcon, Wild Turkey, Eurasian Collared Dove, House and Marsh Wren, Loggerhead Shrike, and Common Yellowthroat.

CLARKSVILLE (36° 30' N, 87° 22'W): 19 Dec. 1998; 0700-1630. Weather: wind calm; temp. 41-50°F; open water; no snow, cloudy with morning rain. Twenty-two observers hit the field in 7 parties tallying 60 party hours and 391 party miles (32 hours and 26 miles on foot, 28 hours and 365 miles by car). Six observers logged 36

feeder hours, and 1 hour and 5 miles were expended owling. 78 species; 9862 individuals. Participants: Amy Atkins, Suva Bastin, Alan Bottomlee, Angelo Buffalino, Mike Filson, Kevin Fitch, Joe Hall, Debbie (compiler: 290 Ardmoor Dr., Clarksville, TN 37043-5851) and Steve Hamilton, Bonnie and Leonard Kruck, Anne Lowe, Mary McRenolds, Gloria and William Milliken, Sally Noel, Anna and Martin Ragland, Joe Schiller, Evette and John Strickland, and Colleen White. Highlights included American Wigeon, Bald Eagle, Rough-legged Hawk, Winter Wren, Hermit Thrush, Pine Warbler, American Tree Sparrow, Chipping Sparrow, Purple Finch, and high counts for Great Blue Heron, Mourning Dove, Eastern Phoebe, White-breasted Nuthatch, Brown Thrasher, Savannah Sparrow, Song Sparrow, and White-throated Sparrow.

COLUMBIA (35° 36' N, 87° 10'W): 19 Dec. 1998; 0430-1800. Weather: wind SW 5-15 mph; temp. 40-53°F; open water; no snow; cloudy with light rain in morning. Nine observers in 6 parties in the field plus two at feeders. Party hours in the field totaled 40 and covered 349 miles. Participants also logged 8 hours at feeders and covered 17 miles in 4 hours of owling. 89 species; 13,050 individuals. Participants: Bob and Janet Brown, Tom Edwards, William Fuqua, William Jernigan, Allyn and Cynthia Lay, Bedford Lochridge, George (compiler: 999 Sunnyside Dr., Columbia, TN 38401) and Cleo Mayfield, and Wendell Robinson. Species count was down 3 from last year. Notable species on this year's count included 3 Snow Geese, a Harlan's Red-tailed Hawk, (no details), 2 Virginia Rails and a Sora, and 18 American Tree Sparrows.

COOKEVILLE (36° 09' N, 85° 28'W): 19 Dec. 1998; 0350-2000. Weather: wind SW 0-15 mph with morning gusts to 30 mph; temp. 41-48°F; sky overcast with rain in the morning. Fifteen observers in 6 parties put in 55 hours and 447 party miles. The count also included 6.25 hours and 75 miles owling. 79 species plus 8 count week; 41,584 individuals. Participants: Daniel Combs, Ginger Ensor, Graham and Holly Kash, Kenneth Morgan, Jan North, Lynda Perry, Jeanne Schmitzer, Richard Simmers, Barbara and Stephen Stedman (compiler: 2675 Lakeland Dr., Cookeville, TN 38506), David Sugeno, Catherine and Winston Walden, and Carol Williams. Notes: This marked the 36th annual Cookeville count. Highlights included first county records for Greater White-fronted Goose and Ross' Goose and first county winter records for Spotted Sandpiper, Prairie Warbler, and Baltimore Oriole. Ruddy Duck and Gray Catbird were recorded for only the second time in the history of the count. In addition, a Harlan's Red-tailed Hawk was observed. Details were provided for the Harlan's, Greater White-fronted Goose, Ross' Goose, Gray Catbird, Prairie Warbler, and Baltimore Oriole.

CROSS CREEKS N.W.R. (36° 28' N, 87° 45'W): 3 Jan. 1999; 0700-1630. Weather: wind calm; temp. 18-20°F; sky partly cloudy with light snow in the morning and afternoon; still water partly frozen. Nine observers in 5 parties put in 59 hours and 271 party miles. 83 species; 18,212 individuals. Participants: Joe and Shirley Casey, Bob and Dotty Crockett, Madge Lawrence, Bill and Joyce North, Ed Toone, and Sarah Welker (compiler: Cross Creeks NWR, 643 Wildlife Rd, Dover TN 37058).

The count of 83 species was substantially higher than the 69 species recorded the previous year. Notable species included American White Pelican, Common Goldeneye, Rough-legged Hawk, American Tree Sparrow, and Vesper Sparrow. Wild Turkey numbers were impressive with 277 located during the count.

ELIZABETHTON (36° 20' N, 82° 08'W): 19 Dec. 1998; 0630-1700. Weather: wind light and variable; temp. 32-47°F; sky cloudy with light rain; 1-3 inches of snow at higher elevations. Seventeen observers in 6 parties put in 44.5 party hours and 259 party miles plus 2.5 hours and 11 miles of owling. 71 species; 5,728 individuals. Participants: Fred Alsop, Rob Biller, Wallace Coffey, Brian Cross, Clinton Jenkins, Andy Jones, Rick Knight (compiler: 804 N. Hills Dr., Johnson City, TN 37604), Howard Langridge, Richard Lewis, Bryan and Peggy Stevens, Kim Stroud, Glenn Swofford, Allan Trently, Gary Wallace, Frank Ward, and Michael Welch. Highlights included Red-shouldered Hawk, Herring Gull, House Wren, Brown Thrasher, Chipping Sparrow, Fox Sparrow, and Evening Grosbeak. Notably high numbers of Pied-billed Grebe, Great Blue Heron, Bufflehead, Hooded Merganser, Wild Turkey, Rock Dove, Belted Kingfisher, and Winter Wren were observed.

FAYETTE COUNTY (35° 06' N, 90° 35' W): 3 Jan. 1999; 0630-1645. Weather: temp. 16-22°F; wind W 15-20 mph; sky foggy with light snow in the morning followed by partly cloudy with light snow in the afternoon; still water partly frozen, moving water open. Eight observers in 4 parties were in the field for 34.5 party hours and 242 party miles. 70 species plus one rare form; 6581 individuals. Participants: Carolyn Bullock, Salye Harry, Rob Peeples, Dick Preston, Martha Waldron, Richard Whittington (compiler: 338 Williamsburg Ln, Memphis, TN 38117) and John and Linda Zempel. Interesting birds included a Harlan's Red-tailed Hawk, House Wren, and American Tree Sparrow. This was the second year for the Fayette County count, which includes the historic Ames Plantation and the Beasley tract along the Wolf River.

GREENEVILLE: 2 Jan. 1999; 0700-1800. Weather: wind SE with gusts of 20-30 mph; temp. 34-56°F; sky cloudy. Water mostly open. Sixteen observers in 8 parties covered 282.5 party miles in 30 party hours by car and on foot, and an additional 12 hours were spent at feeders. 65 species; 7,546 individuals. Participants: Ben, Orland, and Phine Britton; Bill and Patricia Foland, King and Margaret Gaut, Henrietta Holt, Alice Loftin, Don Miller, Velda Moore, Richard and Willie Ruth Nevius, Helen Reed, Helen Spees, and Virginia Williams. Compiler: Jim Holt, 311 Colonial Circle, Greeneville, TN 37745. The 65 species recorded this year were 11 fewer than last year, which tied the high for the past decade for this count. Notable sightings included 6 Barn Owls, Loggerhead Shrike, 6 Palm Warblers, and count week Greater Scaup, Northern Harrier, Pine Warbler, and Rusty Blackbird.

GREAT SMOKY MOUNTAINS N.P. (35° 43' N, 83° 29'W): 27 Dec. 1998; 0745-1715. Weather: temp. 25-38°F; wind NW 0-20 mph; foggy with ice at lower elevations, clear and cold above 3500'. Fourteen birders in 6 parties covered 127 party miles in 40 party hours. 48 species; 1344 individuals. Participants: Jane Beintema, Tony Headrick, Susan Hoyle, Kristine Johnson, Joel Keebler, Charles Nicholson,

Holly Overton, Ann and Doug Pickett, Martha Rudolph, Boyd Sharp, Allan Trently, and David Trently (compiler: 1029 Morrow Dr., Knoxville, TN, 37923-1725). An excellent red spruce cone crop contributed to high numbers of Red-breasted Nuthatches, Pine Siskins, and Red Crossbills. Other notable species included Red-headed Woodpecker, Marsh Wren, and Fox Sparrow. Notably missing were Yellow-rumped Warbler and Evening Grosbeak.

HICKORY-PRIEST (36° 12' N, 86° 40'W): 1 Jan. 1999; 0530-1730. Weather: temp. 18-35°F; partly cloudy skies, no rain or snow. Fifteen observers in 5 parties logged 52.5 party hours and 275 party miles. Observers also covered 10 miles in 2 hours of owling and spent 8 hours feeder-watching. 88 species; 12,856 individuals. Participants: Hazel Cassel, Phillip Casteel, Richard Connors, Beth Creighton, Jerry Drewry, Pat and Susan Hollyday, Cass Kennedy, Smoot Major, Jan Shaw, Chris Sloan (compiler: 6312 Kingsbury Dr., Brentwood, TN 37027), Joe Stone, Sabin Thompson, and John and Melinda Welton. Firsts for the count were Franklin's Gull and Surf Scoter. Other noteworthy sightings included high numbers of several species of waterfowl, all three regular falcons, Calliope Hummingbird for the second consecutive year, Palm Warbler and Chipping Sparrow.

HIWASSEE (35° 22' N, 84° 54'W): 1 Jan. 1999; 0630-1800. Weather: temp. 28-44°F; sky clear, wind variable 5 mph. Twenty-four observers in 9 parties combined for 75 party hours (plus 5 owling) and 392 party miles (plus 57 owling) by foot, car, and boat. 99 species plus one count week; 25,487 individuals. Participants: Alice Benton, Clyde Blum, Mary Lynn Buttram, Kevin Calhoon (compiler: 1185 Mountain Creek Rd., Apt. 715, Chattanooga, TN 37405), Elijah Cavett, Dean Edwards, Danny Gaddy, Doug Geren, Reid Gerhardt, Bill Haley, John Henderson, Dan Jacobson, Bonnie Johnson, Tanya Jordan, Laura Mitchell, Debbie and Roi Shannon, Boyd Sharp, David Trently, Chris Welsh, John Whitaker, Jim and Cynthia Wilkerson, and Hayden Wilson. Highlights included Tundra Swan, Greater White-fronted Goose, Golden Eagle, Merlin, Wild Turkey, and Dowitcher sp. Duck numbers were well up for many species, and high numbers of cormorants, Black Vultures, Bald Eagles, Sandhill Cranes, Killdeer, and Bonaparte's Gulls were also notable. Notable by its absence was Northern Bobwhite.

JACKSON (35° 37' N, 88° 49'W): 2 Jan. 1999; 0630-1700. Weather: windy NW 10-20 mph; temp. dropping from 52°F into the high 20s. Light mist changed to steady downpour followed by freezing rain, sleet, and snow. Eight observers took the field in 5 parties putting in 40.5 party hours and covering 391.5 party miles. 82 species (plus 8 count week); 365,757 individuals. Participants: Carla Dailey, Bob Ford, Clay Gascoigne, Mark Greene (compiler: 2881 Central Ave., Humboldt, TN 38343), David Nailling, Bob Raines, and Bill and Joyce Reinke. The species total of 90, including count week birds, was quite good for this count. Highlights included Greater White-fronted Goose, Bufflehead, Common Goldeneye, Rough-legged Hawk, Fish Crow, Loggerhead Shrike, Pine and Palm Warblers, Lapland Longspur, and Rusty and Brewer's Blackbirds.

KINGSPORT: 30 Dec. 1998; 0700-1815. Weather: wind NW 5-20 mph; temp. 22-37°F; sky partly cloudy with light snow flurries at sunrise. Eight observers in 5 parties put in 41 party hours plus 2 hours owling and covered 242 miles plus 10 miles owling. 74 species plus 3 CW; 5,571 individuals. Participants: Ruth Baker, Dee and John Eiklor, Ron Harrington, Rick Knight (compiler: 804 N. Hills Dr., Johnson City, TN 37604), Tom Laughlin, Bob Quillen, and Arthur Smith. Species count was 4 higher than 1997. Notable species included Common Loon, Double-crested Cormorant, Black-crowned Night-Heron, Lesser Scaup (and 11 other duck species), count week Common Goldeneye, Barn Owl, Loggerhead Shrike, and Pine Warbler.

KNOXVILLE (35° 55' N, 84° 05'W): 3 Jan. 1999 Weather: windy; temp. 20-33°F; sky cloudy with occasional showers or flurries. Twenty-one observers in 10 parties birded 57 hours and covered 277 miles. 84 species plus one count week; 8,993 individuals. Participants: Dean Edwards, Tom Howe, David Howell, Susan Hoyle, Joel Keebler, Nathan Klaus, James David and Bettie McDavid Mason, Janet McKnight, Dan Mooney, Chuck Nicholson, Holly Overton, Martha Rudolph, Mike Ryon, Debbie Searfass, Boyd Sharp, Christine and Roger Tankersley, Allan and David Trently, and Chris Welsh. Compiler: Audrey R. Hoff, 4523 McCloud Rd., Knoxville, TN 37938. Species count was the same as last year, but numbers were down. Species of interest included Merlin, Sandhill Crane, Orange-crowned Warbler, and Vesper Sparrow. Expected but missed included Northern Bobwhite, Common Snipe, Eastern Screech-Owl, Brown Thrasher, and Common Grackle.

MEMPHIS (35° 09' N, 89° 56'W): 20 Dec. 1998; 0600-1800. Weather: temp. 46-50°F; wind SW 10-20 mph; sky cloudy; no snow, open water. Thirty-eight observers took to the field in 10 parties covering 195 miles in 119 party hours. 100 species plus one unusual form and 3 count week; 1,029,738 individuals. Participants: David Blaylock, Chad Brown, Bob Browne, Carolyn Bullock, Theresa Cross, Lillian Durand, Jim and Sue Ferguson, Bob Ford, Kate Gooch, Jesse Grantham, Van Harris, Martha Heinemann, Bob and Ginger Ilardi, Margaret Jefferson, Keith and Peggy Kunkel, Jo Levy, Selma Lewis, Knox Martin, Charles McCrary, Mac and Susan McWhirter, Dwight Miller, Jo Pascual, George and Jeanne Payne, Rob Peeples, Dick Preston, Ernie Restivo, Virgina Reynolds, Brent Tucker, Martha Waldron (compiler: 1626 Yorkshire Dr., Memphis, TN 38119), Barbara Wilson, Nyla and Randy Woody, and John and Linda Zempel. This was the 71st continuous count conducted by members of the Memphis Chapter of the Tennessee Ornithological Society. Species count (including count week birds) was 11 more than in 1997. Notable species included Great Egret (high count), Mute Swans (3), Northern Pintail (cw), Greater Scaup, Harlan's Red-tailed Hawk, Peregrine Falcon (cw), Greater Yellowlegs (cw), Common Nighthawk (1st record), Sedge Wren, White-eyed Vireo (1st record), Orange-crowned Warbler, Common Yellowthroat, LeConte's Sparrow, and a Baltimore Oriole (1st record) that was detected by call.

MURFREESBORO: 26 Dec. 1998 Weather: cold and windy with snow and ice; temp. 15-30°F. Three observers in 2 parties were in the field 3.5 party hours and

covered 62 party miles. Six feeder watchers in four parties observed for an additional 17 hours. 44 species; 2,351 individuals. Participants: Bertha Christzberg, Richard Hunter, Wilma Hunter (compiler: 3659 Wilson Overall Rd, Murfreesboro, TN 37127-7598), Matt and Jane Newberg, Pat and Robert Sanders, and Sam Reid. Nasty weather reduced birder participation and birds on this count. Species of note: 25 Wild Turkeys, White-crowned Sparrows, and Fox Sparrow. Two Ringed Turtle-Doves were reported, but no details were provided. Eurasian Collared Dove would be more likely and has recently made its way into Tennessee.

NASHVILLE (36° 03' N, 86° 56'W): 19 Dec. 1998; 0700-1700. Weather: temp. 40-50°F; sky cloudy with morning rain. Thirty-two observers in 9 parties spent 61 party hours in the field, covering 305 party miles. In addition 8 feeders were watched for a total of 15 hrs. 79 species; 9,558 individuals. Participants: Steve Brandon, Sarah Bruner, Jean Buchanan, Drake Carlton, Phillip Casteel, Hazel Clayton, Richard Connors, Beth Creighton, Debbie Dreves, Frank Fekel, Bill Franks, John Froeschauer, Ed Gleaves, Barbara Harris, Susan Hollyday, Sue Marden, Diana McLusky, Gail Miller, Elizabeth O'Connor, Kim Phillips, George Rentschler, Robert Rich, Polly Rooker, Jan Shaw (compiler: 5019 Timberhill Dr., Nashville, TN 37211-4333), Sheila Shay, Bob Van Kirk, Rita Venable, Cless Vinson, John Walton, Melinda Welton, and Mary Zimmerman. Species count was down 9 from last year's record high. Highlights were Horned Grebe, Snow Goose, 9 duck species, a banded Rufous Hummingbird, Horned Lark, and a Gray Catbird.

NICKAJACK (35° 04' N, 85° 31'W): 2 Jan 1999; 0430-1400. Weather: temp. 37-48°F; wind SE 15-35 mph; cloudy with heavy rain in the afternoon. Fifteen observers in 6 parties spent 49 party hours traversing 292.4 party miles. In addition 5.5 hours and 78 miles were spent owling. 89 species; 10,086 individuals. Participants: David Chaffin, Jerry Drewry, Danny Gaddy, Bill Haley Jr., John Henderson, Dan Jacobson, Johnny Parks (compiler: 164 McDonald Dr., Ringgold, GA 30736-7213), Debbie and Roi Shannon, Chris Sloan, Sabin Thompson, David Vogt, John Whitaker, and Jim Wilkerson. This was the 14th annual count for Nickajack Lake. Participation was down from the previous year, and heavy rain limited birding in the afternoon, resulting in far fewer species detected than in 1998. Highlights were high numbers of Redheads, a Brown-headed Nuthatch, and a Gray Catbird. Savannah Sparrow, Fox Sparrow, Swamp Sparrow, and Common Grackle were found in record low numbers. First time misses for the count included great Horned Owl, Loggerhead Shrike, and Brown-headed Cowbird. Cowbirds were found in record numbers in 1998.

NORRIS (36° 13' N, 84° 05'W): 19 Dec. 1998; 0530-1530. Weather: temp. 41-50°F; wind var. 0-10 mph; sky cloudy with light rain. Sixteen observers in 7 parties birded 38 party hours covering 223 party miles plus 2.5 hours and 1.5 miles of owling. 70 species plus one count week; 4,096 individuals. Participants: Dean Edwards, David Hankins, Tony Headrick, Audrey Hoff, Susan Hoyle, Dev Joslin, Joel Keebler, Nell Moore, Charles Nicholson (compiler: Box 402, Norris, TN 37828), Laurie Pearl, Martha Rudolph, Boyd Sharp, Christine and Roger Tankersley, David Trently, and

Rodney Von Gruenigen. Highlights included Blue-winged Teal, a count week Red-headed Woodpecker, 10 Winter Wrens, and 9 Palm Warblers. No winter finches were observed.

REELFOOT LAKE (36° 25' N, 89° 23'W): 19 Dec. 1998; 0430-1830. Weather: temp. 34-48°F; wind N 5-20 mph; light rain in morning, partly cloudy p.m. Ten observers took the field in 4 parties, covering 328.5 party miles in 46.5 party hours. One hour and 10 miles were spent owling. 110 species plus 5 count week and an "Oregon" Junco; 673,820 individuals. Participants: Jerry Drewry, Mark Greene (compiler:2881 Central Ave., Humboldt, TN 38343), Joe Guinn, Nancy Moore, David Nailling, Chris Sloan, Joe Stone, Sabin Thompson, Jeff Wilson, and John Zempel. American Bittern and Long-eared Owl were new species for the Reelfoot count. Other highlights included Black-crowned Night-Heron, Greater Scaup, Merlin, 55 Wild Turkeys, Greater Yellowlegs; Barn and Short-eared Owls; Red-breasted Nuthatch; House, Sedge, and Marsh Wrens; Orange-crowned Warbler, Common Yellowthroat, LeConte's Sparrow, an Oregon race Dark-eyed Junco, many Lapland Longspurs, Western Meadowlark, and Brewer's Blackbird. Fairly big misses count day included Common Goldeneye, both vultures, Northern Bobwhite, Eastern Screech-Owl, and winter finches.

ROAN MOUNTAIN (36° 06' N, 82° 07'W): 20 Dec. 1998; 0600-1800. Weather: wind W-NW 0-40 mph (localized); temp. 37-52°F; sky partly cloudy; 0-3" of snow at higher elevations. Six observers in 2 parties covered 105 party miles in 19.5 party hours and put in 1.5 hours and 2 miles owling. 52 species; 1,715 individuals. Participants: Fred Alsop, Rob Biller, Rick Knight (804 N. Hills Dr., Johnson City, TN 37604), Tom Laughlin, Larry McDaniel, and Allen Trently. Highlights included Pied-billed Grebe, Bufflehead, Red-shouldered Hawk, Ruby-crowned Kinglet, and Fox Sparrow. Numbers of Eastern Phoebe, Winter Wren, Eastern Towhee, Fox Sparrow, Dark-eyed Junco, and American Goldfinch were the highest in the last 20 years.

SAVANNAH (35° 08' N, 88° 09'W): 30 Dec. 1998; 0345-0540, 0630-1715. Weather: temp. 21-33°F; wind NNW 10-20 mph; sky partly cloudy; open water. Seven observers in 4 parties put in 35 party hours and 244 party miles plus 2 hours and 26 miles owling. 97 species; 16,188 individuals. Participants: Ralph Brinkhurst, Jeff Garner, Sean and Steve McConnell, Jim and Nate Peters, and Damien Simbeck (compiler: 4905 County Rd. 33, Killen, AL 35645). Osprey was a first county winter record, and Sandhill Cranes were a first county record. Other highlights included Greater Scaup, Sedge Wren, and Marsh Wren, with high numbers of Black and Turkey Vultures and Vesper and Savannah Sparrows. Most of the vultures were dining on dead pigs in a farmer's field — not your typical bird feeder.

SHADY VALLEY: 2 Jan. 1999; 0500-1600. Weather: temp. 35-38°F; wind 15-30 mph; overcast with drizzle in afternoon, 2-4 inches of snow on the ground, most side roads were icy. Six observers birded 32 party hours covering 198 party miles with an additional 34 miles and 3 hours spent owling. 61 species; 2,596 individuals. Participants: Ron Carrico, Wallace Coffey, Rick Knight, Tom Laughlin (compiler: 124

Sugar Hollow Ridge Rd., Roan Mountain, TN, 37614), and John and Lori Shumate. Species count was up 8 from last year. Notable were Osprey, White-crowned Sparrow, and a lack of winter finches.

WARREN COUNTY (35° 40' N, 85° 46'W): 2 Jan. 1999; 0500-1530. Weather: temp. 46-53°F; wind SE 23-39 mph; sky cloudy a.m., cloudy with light rain p.m.; open water. Four observers in 2 parties put in 19 party hours and 147.5 party miles plus 1 hour owling. 60 species; 7,550 individuals. Participants: Crystal Littleton, Clyde Malone, Donna Milstead, and Mickey Ware. Compiler: James Pearsall, 131 Beech Hill Dr., McMinnville, TN 37110. Notable species include Brown Thrasher, American Pipit, Loggerhead Shrike, Fox Sparrow, and undocumented Brewer's Blackbirds.

The Migrant, 70 (1) 27, 1999.

SUMMARY OF TENNESSEE'S 1999 MID-WINTER EAGLE COUNT

Bob Hatcher
Tennessee Wildlife Resources Agency
Nashville, TN

During Tennessee's 21st annual Mid-Winter Eagle Count of January 1-15, 1999, 405 Bald Eagles and six Golden Eagles were reported statewide. This compared to 319 Bald Eagles in 1998 and three Golden Eagles in 1998. The all-time statewide high was 463 Bald Eagles in 1995. The highest seven counts (all in Tennessee) were: Kentucky Lake (south of LBL) - 100, Reelfoot Lake and vicinity - 91, Dale Hollow Lake - 69, Land Between the Lakes - 37 (33 on KY Lake side), Chickamauga Lake - 31, Watts Bar Lake - 18, and Pickwick Lake - 10. Eagles were found on 32 of the 50 areas surveyed. There were no reports for 11 additional areas, all of which normally have low or absent eagle populations.

The 21-year average count for 1979-99 is 302 Bald Eagles, averaging 38 percent juveniles. Prior five-year average Bald Eagle counts are:

Period Avg.	**Bald Eagle Count**	**% Juveniles**
1979-83 (5 Yrs)	264	45
1984-88 (5 Yrs)	261	34
1989-93 (5 Yrs)	286	35
1994-99 (6 Yrs)	382	36

Reelfoot Lake, which normally has substantially the largest winter population, had 91 eagles during the count, compared to Reelfoot's all-time high of 188 in 1995. During the 1999 count, Reelfoot Lake was about 95 percent frozen, forcing many eagles temporarily to scatter along the Mississippi River and probably Kentucky Lake, which had a significant increase.

Counts can be highly variable from year to year due primarily to weather conditions. The relatively low count of 1998 was believed due primarily to milder weather, leaving more open water for feeding on fish further north. The 1999 count should have been significantly higher if the western sites were not mainly frozen during the count. Due to such annual fluctuations, analysis of 5-year averages provides clearer indications of long-term trends.

Mid-winter eagle count participants included the: Tennessee Ornithological Society, U.S. Fish & Wildlife Service, Corps of Engineers, Tennessee Valley Authority, TWRA and private citizens. Thanks to everyone who participated.

The Migrant, 70 (1) 28-32, 1999.

MINUTES OF THE 1999 SPRING MEETING

The Spring Meeting of the Tennessee Ornithological Society (TOS) was held on 30 April - 02 May 1999 at Reelfoot Lake State Park near Tiptonville. The meeting was hosted by the Memphis Chapter. Several excellent field trips were taken to local birding spots and a banquet was help at the Ellington Center on Saturday night. The meeting of the TOS Directors was called to order by TOS President Susan McWhirter. Secretary Knox Martin reported a quorum present. Copies of the minutes of the Fall meeting were available for review. George Payne made a motion to approve the minutes. The motion was seconded by David Vogt. The vote to approve was unanimous.

REPORT OF OFFICERS. West Tennessee Vice President Bob Ford congratulated TOS member Martha Waldron for helping to get four West Tennessee areas designated as "Important Birding Areas". The areas are Eagle Lake WMA, Wolf River Bottoms, Earth Complex, and Phillipy Pits. A special thanks was also given to the Memphis chapter for hosting the meeting. The Middle Tennessee report included the deaths of two TOS members. Gordon Sell and Bob Nixon both passed away in 1999. The Ann Tarbell Library at Radnor Lake State Park was dedicated with many Nashville TOS members present. The Nashville TOS Chapter will help the Partners in Flight organization with future migration counts in the area. East Tennessee Vice President Ron Hoff reported that the Knoxville Chapter had erected two new Osprey nesting platforms. Dev Joslin is working at the Oak Ridge Reservation with a group called AFORR to help preserve this unique habitat.

DIRECTORS AT LARGE. No reports.

SECRETARY'S REPORT. Knox Martin again requested that member chapters get proxy forms and a list of current chapter officers to him. These proxy lists could be important if there is a critical vote during the meeting.

TREASURER'S REPORT. Treasurer David Trently presented the following report: Total income from all areas was $22,297.15. Total expenses were $38,777.19. Total operating assets, including savings, checking, and the Dean Witter Liquid Asset Fund was $38,673.64. Anticipated liabilities were $22,650.00. The Endowment Fund contained 8819.645 shares @ $20.29 for a total of $178,950.59, making the total assets (Operating Assets plus Endowment Fund) $217,624.23.

CURATOR'S REPORT. No report.

MIGRANT Editor Dev Joslin reported that the next issue was at the printers and should be to members very soon. The following issue is almost ready. It has been decided to change printers. In the past the average cost for printing was $15,400 per year. By changing printers the cost should be reduced to $10,200. Printing will now take place in Knoxville.

TENNESSEE WARBLER Editor Theresa Graham reported that the deadline for the next issue was June 30. Ron Hoff requested that an email list of members be

included in a future issue. Members can also send email addresses to the TOS website. See Ron for the TOS address.

NOMINATING COMMITTEE. Carolyn Bullock presented the slate of officers for the next two years. They are: Vice President West Tennessee - Dick Preston, Vice President Middle Tennessee - Richard Connors, Vice President East Tennessee - Ron Hoff, Secretary - Knox Martin, Treasurer - David Trently, Curator - Chuck Nicholson, Directors at Large: West Tennessee - Donna Ward, Middle Tennessee - Morris Williams, and East Tennessee - David Hassler. These names were placed in nomination by Carolyn Bullock and will be voted on at the banquet. The vote that night was unanimous.

FINANCE COMMITTEE. David Trently reported that the committee had decided to look into splitting the TOS assets into several different funds. Currently they are all in one single fund. A report will be made to the committee after more facts are known.

PROJECT FUNDING & CONSERVATION COMMITTEE. Bob Hatcher reported that the winner of this year's Goodpasture Award was Roger Tankersley, a doctoral student at the University of Tennessee, Knoxville. His study will be "Stopover Habitat and the Geography of Migration". His award is for $500.

TENNESSEE BIRDS RECORDS COMMITTEE. Chris Sloan reported that the committee had voted on three records. One was accepted (Swainson's Hawk, second or third state record), and two were rejected (Northern Gannett and White-winged Dove). The committee is currently working on a system to establish distribution or status codes for all of the birds found in Tennessee. This is a long term project. Updates will be given at future meetings.

CONSERVATION COMMITTEE. No report.

COLLATERAL MATERIALS. Carolyn Bullock reported that decals and patches were available for purchase. Since the last report 13 patches have been sold for a total of $27.50, and 19 decals were sold for a total of $57. This adds $84.50 to the treasury.

PARTNERS IN FLIGHT. Bob Ford needs volunteers for point counts around the state. He can be easily reached at BFORD@TNC.ORG. Dev Joslin reported on the recent TOS trip to the Dominican Republic. 13 TOS members went. Partners in Flight has several projects going on there, but there are still many opportunities for TOS to help with projects.

TECHNOLOGY. Susan McWhirter reported on the progress of the TOS website. Everything with "TOS" is taken. Another possibility is "TN BIRDS". Watch for updates in the *Warbler*. Chris Sloan reported that a new webmaster is needed. If you are interested, see Chris. He would like to see our site modeled after the Georgia Ornithological Society site. TOS would probably have to hire somebody to set it up, then have a TOS member maintain it. Anything useful across the state could be included. Chapter news would be especially useful. Chris will look into options and make a report at the Fall meeting.

CONSERVATION AND REINVESTMENT ACT. Bob Hatcher reported on this upgrade of the former Teaming With Wildlife funding program. CARA would provide either 7% (House bill) or 10% (Senate bill) of all royalties from offshore drilling for a fund for state non-game wildlife programs. This works out to either $5.8 million or $8.3 million for Tennessee. Let your congressmen know where you stand. Bob has email addresses of all of the Tennessee representatives and congressmen available after the meeting.

NORTH AMERICA MIGRATION COUNT. Ron Hoff reported on the upcoming national count. TOS is taking part in this count. Each county is a separate count area. Mail all your results to Ron. Keep track of hours by car and foot as well as miles by car and foot. Use a separate card for each county you count.

IMPORTANT BIRD AREAS. Chris Welsh and Janet York reported that more work is needed for the IBA areas. Any good birding spot could qualify. The form is a long one (4 pages) that needs to be cut back. A new chairman is also needed. If you are interested, see Chris.

NEW BUSINESS. A foray will be held at Beersheba Springs on 28-31 May. George Mayfield has set aside eight rooms for TOS members. See him for directions. Martha Waldron reported on the current status of the Bird Sanctuary Designation project. The plan is for any individual or company to request a certificate from TOS stating that they have a Bird Sanctuary. Each chapter will handle their own areas. There will be no real cost to TOS. A form will be made available to those who request the designation. After it is filled out, the local TOS chapter will present them with a certificate. Martha Waldron made a motion that TOS authorize chapters to officially recognize an area as a bird sanctuary. Motion was seconded by Ron Hoff. Discussion from the floor centered on cost to chapters. The only cost would be the cost of a certificate. The certificate would be standard for all chapters and each chapter could revoke the certificate if needed. The vote to recognize was unanimous. George Mayfield will work on some designs for the certificate and present them to the members at the Fall meeting.

CONSERVATION FUND. Chris Sloan and Melinda Welton reported on a new program to set up a Research Funding Committee to manage conservation funding in the future. This new committee will not require any new funding or dues increases since the financing is already in place. The plan is for X number of dollars to be put into the fund each year from surpluses that are available from dues. The fund will be a floating fund with no set amount to be spent each year. The committee will review applications from people who would like funding for research or environmental education. Grant forms will be available to any interested parties. This is a way for TOS to use our money more effectively for conservation projects. These would be Tennessee projects dealing with migrants, migratory habitat, or international projects concerning Tennessee. Our money would not go out of state. The projects will be directly related to Tennessee or national projects like Partners In Flight. Step one is to form a committee. Currently the TOS has the Project Fund-

ing Committee. This committee will be renamed the Conservation and Research Committee. A motion was made by Melinda Welton & seconded by Dev Joslin to change the name of the Program/Project Funding Committee to the Conservation and Research Fund. Discussion from the floor centered around the status of the Katherine Goodpasture Award. The new committee will oversee the Goodpasture fund, but it will still be a separate fund. There is also the possibility of a Goodpasture sub-committee on the fund. Six members will serve on the new committee, two from each division of the state. The vote to change the name was unanimous.

The second step involved funding of the new committee. There is currently a fund called the Briley Fund in the Dean Witter Trust that was set up in the 1970s. This was a $4000 to $5000 bequest left to TOS for unstated purposes. The new Conservation and Research Fund would like to use this Briley Fund as start-up funding. A motion was made by Melinda Welton and seconded by Ron Hoff that $5000 from the Dean Witter Trust Company Liquid Asset Fund be earmarked for the Conservation and Research Fund. Considerable discussion from the floor followed. Much of it centered around where the funding for the new fund would come from. Chris pointed out that at the end of each year 80% of the surplus funds would go to the Conservation and Research Fund. The other 20% would go to the TOS reserves. Only money that will not be needed to cover TOS expenses will be used. The endowment fund currently has enough to pay for the printing of the *Migrant* using interest alone. Bob Ford wanted to know what the guidelines would be for how decisions would be made. Chris Sloan said that much of this will be in the next *Warbler* and will be discussed at the Fall meeting. No money will be spent by the fund until operational guidelines are in place. The money could be returned to the TOS Dean Witter Fund if nothing ever happens. Susan McWhirter pointed out that very specific guidelines are in place. The basics of the resolution that established the old Projects Funding Committee, now the Conservation and Research Funding Committee read as follows: "Resolve that TOS will establish a permanent fund to support programs relating to Tennessee birds in the areas of education, scientific research and conservation. Programs must serve the cause of ornithology in Tennessee to be considered for funding. Statewide Board of Directors must vote to approve specific projects presented for consideration. All program funds must be spent on specific TOS programs adopted at statewide level. The program will be administered at the statewide level by the Program Funding Committee. The committee members will serve staggered two year terms, the treasurer serving as ex-officio member." The committee is in place. Any change of the guidelines will have to be approved by a majority vote of the Board of Directors. The vote was taken and passed with 2 members voting no.

The third and final step involved voting on how to continue to fund the fund in the future. The committee plan was to take 80% of the surplus each year at the end of the year after money had been spent and expenses are known. Take 80% of what is left and roll it into the Conservation and Research Fund. Chris Sloan made a motion that was seconded by Melinda Welton to do that. Discussion from the floor

again centered around how the money would be spent. What types of projects would be funded. How much money is involved each year? The amount is about $4000. If there is no surplus at the end of the year then there would be no funding that year. Chris made the point that the percent could be dropped to 20% until the membership saw what types of projects were being funded. It was also pointed out from the floor that the Board of Directors has the authority now to approve or disapprove the funding of the committee. After much discussion a motion was made by Dev Joslin and seconded by Richard Connors to lower the amount from 80% to 40% of the yearly surplus. The motion was that at the end of each physical year 40% of surplus operating funds which would not include anything regarding the endowment for the *Migrant* be earmarked for the now named Conservation and Research Fund. The vote was yea - 15, nay - 2, abstain - 1. The motion carried on a majority vote.

CERULEAN ATLASING. Melinda Welton reported that this is the last year for the project. Local TOS chapters will help with the atlasing. Volunteers are needed.

TOWER KILLS. Melinda Welton reported that Sue Marden was taking over the program. Ron Hoff reported seeing an article that said that there were currently 40,000 towers in the state. At least 5000 more are being added yearly. Bob Hatcher pointed out that TWRA had a booklet on guidelines for towers. Also check the POWERFIELD.COM website.

President Susan McWhirter thanked all those individuals who had helped her for the past two years and adjourned the meeting.

Respectfully submitted,
KNOX MARTIN, Secretary

The Migrant, 70 (1) 33-43, 1999.

1999 TENNESSEE NORTH AMERICAN MIGRATION COUNT

Ron Hoff, State Compiler
282 Hackworth Ln., Clinton, Tn. 37716
and
Dev Joslin
112 Newcrest Lane, Oak Ridge, TN 37830

The number of counties participating in the North American Migration Count continues to grow in Tennessee. In 1999, 23 counties — almost one-fourth of the state — reported sightings for the count. This compares to 18 counties in 1998 and 13 counties in 1997, the first year *The Migrant* published results from this count. Several of the 1999 North American Migratory Bird Day counts were conducted in conjunction with 1999 Spring Counts. The counties with the largest numbers of observers were Hamilton, Shelby, and Knox. Over half the counties (12) were surveyed by only one or two observers. Thanks seem due to these hardy souls attempting to survey entire counties in one day.

A sunny, mild (temperatures 50-80° F), pleasant day across the state produced a record 213 species. Highlights included 19 species of shorebirds, 36 species of warblers, and some unusual or seldom counted species, such as Anhinga, Least Bittern, probable breeding Hooded Mergansers, Willet, Ruddy Turnstone, Eurasian Collared Dove, Barn Owl, Western Kingbird, Scissor-tailed Flycatcher, American Tree Sparrow, and Red Crossbill. Some lingering winter species that added to the mix were: Horned Grebe, Snow Goose, Green-winged Teal, Gadwall, Ruddy Duck, Northern Harrier, Brown Creeper, Hermit Thrush, American Pipit, and Fox Sparrow.

Other uncommon species that had not been found in the 1998 North American Count included American Bittern, King Rail, Common Moorhen, Long-billed Dowitcher, and Common Raven. Thirty-three species were recorded in only one of the counts, including Yellow-crowned Night-heron, Peregrine Falcon, Black-necked Stilt, Western Sandpiper, Herring Gull, Forster's Tern, Black Tern, Black-billed Cuckoo, Least Flycatcher, Red-breasted Nuthatch, Brown-headed Nuthatch, Sedge Wren, and Orange-crowned Warbler.

Species found in the 1998 count but missing from the 1999 count were American Wigeon, Red-breasted Merganser, Virginia Rail, Baird's Sandpiper, Stilt Sandpiper, Bonaparte's Gull, Common Tern, Yellow-bellied Sapsucker, Vesper Sparrow, Henslow's Sparrow, Purple Finch, and Pine Sisken. Other species that were probably in the state on count day, but not found were American White Pelican, Alder Flycatcher, Black-capped Chickadee, Painted Bunting, and Lark Sparrow.

WEATHER AND OBSERVERS

ANDERSON: Clear and sunny with some wind. Observers: Betty Reid Campbell, Jim Campbell, Tony Headrick, Ron Hoff (state compiler: 282 Hackworth Ln., Clinton, TN 37716), Dollyann Myers, Boyd Sharp. Species observed only in this

county were Horned Grebe, Ring-necked Duck, and Western Sandpiper (3). Also of note were Willow Flycatcher, Loggerhead Shrike, and Mourning Warbler, as well as good numbers of Barred Owls (7), Wood Thrushes (53), and Yellow-throated Warblers (13).

BLOUNT: Clear and sunny, with fog early. Observers: Jean Alexander, David Johnson, Susan Schott. This was the only county where Northern Harrier and Hooded Mergansers (12) were observed. Northern Shovelers (5), a Bald Eagle, and 22 Common Snipe were also noted.

CAMPBELL: Fog early, windy PM. Observer: Nell Moore. Species of note were Snow Goose, Willow Flycatcher, Golden-winged Warbler (4), and Lincoln's Sparrow (2). High numbers (considering only one observer) of Cerulean Warbler (22), Black-and-white Warbler (18), Kentucky Warbler (27), Hooded Warbler (39) and Scarlet Tanager (40) were recorded.

CARROLL: Clear and sunny. Donna Ward, Louise Ward. Ten Gray Catbirds and six late White-throated Sparrows were recorded in four hours of observation time.

CHEATHAM: Sunny. Jerry Drewry and Sabin Thompson. Notable species were Bald Eagle, White-rumped Sandpiper (2), and Marsh Wren (2). High numbers of Whip-poor-wills (15) and Savannah Sparrows (25) were counted.

DAVIDSON: Sunny. Jan Alexander, Phillip Casteel, Richard Conners, Marty Dehart, Carrie Dortch, David Dortch, Joe Francis, Bill Franks, Mark Hackney, Barbara Harris, Cass Kennedy, Kathy Lee, Heather Leverett, Sue Marden, Dick Newton, Gwen Quillen, George Rentschler. Chris Sloan, Mary Zimmerman. This county had the highest count of Philadelphia Vireos (6). Also of note were Marsh Wren, Olive-sided Flycatcher, Willow Flycatcher, 3 Wilson's Warblers, 5 Canada Warblers, and 3 Lincoln's Sparrows.

FAYETTE: Clear and sunny. Danny Graham, Theresa Graham. Nine Great Egrets were observed on this count.

GREENE: Sunny and partly cloudy. Don Miller, Linda Northrup, Jo Anne Routledge, Larry Routledge. This was the sole count to observe Long-billed Dowitcher, as well as the highest numbers of Wood Ducks (47) and Black-throated Blue Warblers (14). American Pipit and Warbling Vireo were also recorded.

HAMILTON: Fair, with some light wind. Observers: Nelson Bennet, Alice Benton, Mary Lynn Buttram, Kevin Calhoon, Carl Chadwell, Janice Chadwell, Tom Chittenden, Anita Gaddy, Danny Gaddy, Bill Haley, John Henderson, Daniel Jacobson, Bonnie Johnson, Dawn Johnson, Tanya Jordan, Johnnie Sue Lyons, Barbara McMahan, Mike McMahon, Matt Morris, Johnny Parks, Tom Patton, Debbie Shannon, Roi Shannon, David Vogt, Cynthia Wilkerson, Jimmy Wilkerson, Chris Williams, Hayden Wilson, Libby Wolfe, Ron Wolfe. This large contingent of observers observed the only Least Bittern, Peregrine Falcon (2), Common Moorhen, Eurasian Collared Dove, Black-billed Cuckoo, and Brown-headed Nuthatch (12) of the day. Highest numbers of Black Vulture (161), Red-shouldered Hawk (21), Red-tailed Hawk (40) and Prairie Warbler (81) were also recorded. Also of note were a

Bald Eagle, American Bitterns (2), Forster's Tern, Olive-sided Flycatcher, and American Pipit.

HENRY: Clear. Observers: Donna Ward, Louise Ward. The most notable bird of this count was a Cerulean Warbler.

JEFFERSON: Sunny, some wind. Observers: Dean Edwards, D.R.Hansard, Tony Hickle, Pete Wyatt. Late Green-winged Teal (2) were seen only in this county, which also had the highest number of Grasshopper Sparrows (12). Also seen were 22 Black-crowned Night-herons, two Bald Eagles, a White-rumped Sandpiper, a late Brown Creeper, and three Loggerhead Shrikes.

KNOX: Clear and sunny with some wind. Observers: Frank Bills, Sharon Bostick, Bob Collier, Louise Collier, Charles Nicholson (with 15 students), Laurie Pearl, Beth Schilling. Notable sightings included a White-rumped Sandpiper, 14 Blackpoll Warblers, and 5 Canada Warblers.

LAKE: Fair and calm. Observer: Melinda Welton. This one observer recorded six species not observed in any other count: Yellow-crowned Night-heron (2), Gadwall (6), King Rail (2), Ruddy Turnstone (1), Black Tern (10) and Western Kingbird (1). The high count for Dickcissel (114) was complemented by observations of Mississippi Kite (3), Dunlin, Forster's Tern (2), Mourning Warbler (1), and Lincoln's Sparrow (5).

MONROE: Fair. Observer: David Trently. Two species not seen elsewhere were Common Raven and Sedge Wren. Two Marsh Wrens, 12 Black-throated Blue Warblers, and 7 Dark-eyed Juncos were also observed.

MONTGOMERY: Clear with PM breeze. Observers: Joe D. Allen, Danielle Evans, Paul Evans, Kevin Fitch, Mare Lynn Fitch, Andrew Hall, Joseph Hall, Matthew Hall, Debbie Hamilton, Steven Hamilton, Annie Heilman, Ann Lowe, Gloria Milliken (compiler),William D. Milliken, Sallie Noel, Barry Podell, Joseph Schiller, Stanley York. Least Flycatcher, Orange-crowned Warbler, American Tree Sparrow, and Fox Sparrow were all unique to this count, which also had the highest number of Bald Eagles (4), Northern Bobwhites (32), and Warbling Vireos (17). Also of note were three late Hermit Thrushes and 28 Prothonotary Warblers.

PUTNAM: Mostly sunny with variable winds. Observers: Terry M. Campbell, Laurie Cleary, Daniel L.. Combs, Mike Edwards, Ginger K. Ensor, Graham S. Nash, Kenneth L. Morgan, Jan M. North, Tom Saya, Joanne T. Schaefer, Jeanne C. Schmitzer, Richard W. Simmers, Jr., Barbara H. Stedman, Stephen J. Stedman (compiler), Winston A. Waldon. This count recorded the only lingering Ruddy Duck of the day, along with a late Snow Goose. Very high numbers of numerous species were counted, especially vireos and warblers. Included in the list were 13 American Kestrels, 11 Barred Owls, 48 Yellow-throated Vireos, 453 Red-eyed Vireos, 18 Blue-winged Warblers, 27 Yellow-throated Warblers, 29 Cerulean Warblers, 108 Black-and-white Warblers, 26 Worm-eating Warblers, 129 Ovenbirds, 68 Kentucky Warblers, 233 Common Yellowthroats, 72 Hooded Warblers, and 190 Chipping Sparrows.

ROANE: Clear and mild. Observers: J. Devereux Joslin (compiler), Jason Mitchell. This count recorded the only Herring Gull of the day. Also notable for this county were 17 Lesser Yellowlegs, a Caspian Tern, one Red-headed Woodpecker, 5 Blue-winged Warblers, and 4 Prothonotary Warblers

RUTHERFORD: Sunny. Observers: Jay Desgrosellier, Jan Shaw (compiler). Notable were a high number of Black Vultures (47) and a White-rumped Sandpiper.

SEVIER: Clear and mild. Observers: Susan Hoyle, Martha Rudolph. This count was responsible for the only records of Red-breasted Nuthatches (2) and Red Crossbills (4). Other high elevation species hardly found elsewhere in the state at this late date were Brown Creeper (4), Winter Wren (3), Golden-crowned Kinglet (3), and Dark-eyed Junco (10) (all high counts for the day). Also observed were a Bald Eagle and two Cerulean Warblers.

SHELBY: Partly cloudy with moderate wind. Observers: Charles Askew, Betty Blaylock, Dana Blaylock, Carolyn Bullock, Chad Brown, Bob Brown, Karen Forbes, Martha Heinemann, Margaret Jefferson, Kathy Katze, Prudence Katze, Jo Pascual, George Payne, Jeanne Payne, William R. Peeples, Dick Preston, Barbara Priddy, Forest Priddy, Virginia Reynolds, Ed Thomas, Martha Waldron (compiler), Barbara Wilson, John Zempel, Linda Zempel. This count recorded the only observations of Anhinga, Black-necked Stilt (25), Willet (2), and Scissor-tailed Flycatcher. High counts of Great Egret (96), Little Blue Heron (30), Mississippi Kite (26), Least Sandpiper (384), Yellow-billed Cuckoo (26), Red-headed Woodpecker (25), Acadian Flycatcher (83), Horned Lark (29), Fish Crow (21), and Swainson's Warbler (9) were also recorded. Also notable were American Bittern (2), Bald Eagle, two late Winter Wrens, a Marsh Wren, 16 Cerulean Warblers, 55 Kentucky Warblers, and three Lincoln's Sparrows.

SUMNER: Sunny and mild. Observer: Chris Sloan. This count was responsible for the highest numbers of Double-crested Cormorants (205) and Black-crowned Night-Herons (80). White-rumped Sandpiper and Dunlin were also seen.

WARREN: Sunny and windy. Observers: Mac McWhirter, Susan McWhirter. The most notable aspect of this count were the two Barn Owls recorded.

WILLIAMSON: Sunny. Observers: Hazel Cassel, Richard Conners, Bill Franks, Cass Kennedy, Barbara Stokes, Rita Venable. Olive-sided Flycatcher (2), three Blue-winged Warblers, and two Cerulean Warblers were included in this count.

North American Migration Count, May 8, 1999

Species	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
Common Loon	-	1	-	-	-	2	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	5
Pied-billed Grebe	-	2	-	-	-	2	-	1	2	-	-	-	2	-	-	-	-	-	-	1	-	-	-	10
Horned Grebe	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Dbl-crest Cormorant	-	2	-	-	-	-	-	-	2	-	-	-	2	1	-	1	2	-	-	48	205	-	-	263
Anhinga	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
American Bittern	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	4
Least Bittern	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Great Blue Heron	31	2	2	-	7	5	1	2	241	5	51	13	71	12	14	10	7	14	4	41	44	3	-	580
Great Egret	-	-	2	-	4	-	9	3	1	-	5	-	39	-	2	-	-	1	-	96	-	-	-	162
Snowy Egret	-	-	-	-	3	-	-	-	1	-	-	-	5	-	-	-	-	-	-	7	-	-	-	16
Little Blue Heron	-	-	-	-	-	2	-	-	4	-	-	-	3	-	-	-	-	-	-	30	-	-	-	39
Cattle Egret	-	-	-	-	-	-	-	-	2	-	-	-	8	-	-	-	-	-	-	4	1	-	-	15
Green Heron	1	6	2	-	5	6	3	2	20	-	9	-	1	-	14	11	-	2	1	3	-	3	1	90
Blk-crown Night-Heron	-	1	-	-	8	-	-	-	-	-	22	-	2	-	-	-	-	4	-	-	80	-	-	117
Ylw-crown Night-Heron	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Snow Goose	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
Canada Goose	64	31	21	-	30	51	14	42	284	15	27	7	-	39	102	113	17	28	15	61	25	8	17	1011
Wood Duck	4	7	10	-	6	-	-	-	47	-	24	5	4	1	11	20	-	2	3	17	2	-	-	163
Green-winged Teal	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
Mallard	20	2	26	-	4	24	5	21	109	2	17	5	17	2	42	9	2	3	3	39	15	2	5	374
Blue-winged Teal	-	16	-	-	-	3	-	-	18	-	2	-	13	-	-	-	-	3	-	16	5	-	-	76
Northern Shoveler	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	10
Gadwall	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	6
Ring-necked Duck	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Lesser Scaup	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	5	-	-	-	7
Hooded Merganser	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Ruddy Duck	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Black Vulture	5	1	-	-	50	7	4	9	161	-	7	-	-	-	51	12	8	47	-	-	2	-	11	375
Turkey Vulture	29	16	19	-	25	13	15	15	120	-	34	8	5	9	83	59	3	9	2	-	3	18	22	507
Osprey	1	-	-	-	-	-	1	-	1	-	1	2	1	-	-	-	2	1	-	-	-	-	-	10

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	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
Mississippi Kite	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	26	-	-	-	29
Bald Eagle	-	1	-	-	1	-	-	-	1	-	2	-	2	-	4	-	-	-	1	1	-	-	-	13
Northern Harrier	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Sharp-shin. Hawk	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	3	-	-	-	-	-	-	-	7
Cooper's Hawk	-	-	-	-	1	-	-	-	3	-	-	1	-	-	2	2	-	1	-	-	-	1	2	13
Accipiter sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3
Red-shoulder Hawk	7	1	2	-	5	-	-	-	21	-	1	1	2	-	7	4	1	1	-	7	-	-	1	61
Broad-winged Hawk	2	1	2	-	1	1	-	-	7	-	2	2	1	1	2	12	-	-	-	2	-	-	1	37
Red-tailed Hawk	12	1	1	-	2	16	2	2	40	-	4	2	1	3	15	13	1	4	2	10	-	2	4	137
American Kestrel	-	-	-	-	-	2	-	3	3	-	2	-	1	-	9	13	-	-	-	4	-	2	1	40
Peregrine Falcon	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Wild Turkey	-	-	2	-	4	-	-	-	4	-	6	-	-	-	8	5	2	-	-	1	-	-	-	32
Northern Bobwhite	7	4	-	-	3	13	-	3	26	-	7	6	1	-	32	21	7	5	-	16	-	2	3	156
King Rail	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Sora	-	2	-	-	2	-	-	-	2		-	-	-	-	-	-	-	-	-	6	-	-	-	12
Common Moorhen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
American Coot	3	7	6	-	-	-	1	5	4	-	9	-	-	-	-	-	-	-	-	8	3	-	-	46
Semipalm. Plover	-	-	-	-	3	-	-	-	1	-	1	-	6	-	-	-	-	1	-	-	-	-	-	12
Killdeer	13	6	7	-	5	8	1	9	84	2	14	6	10	6	43	37	1	3	5	62	2	1	15	340
Black-necked Stilt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	25
Greater Yellowlegs	-	2	-	-	3	-	-	-	4	-	-	-	1	-	1	-	-	-	-	-	-	-	-	11
Lesser Yellowlegs	5	14	-	-	6	-	-	10	22	-	1	2	27	-	1	-	17	2	-	3	-	-	-	110
Solitary Sandpiper	-	9	-	-	5	1	-	1	18	-	3	3	2	3	3	2	-	1	2	32	-	-	-	85
Willet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Spotted Sandpiper	3	-	3	-	8	2	1	4	4	-	3	1	3	-	4	3	-	1	1	10	1	-	-	52
Ruddy Turnstone	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Semipalm. Sandpiper	4	-	-	-	2	1	-	-	31	-	1	-	-	-	3	-	-	-	-	-	-	-	-	42
Western Sandpiper	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Least Sandpiper	2	-	-	-	27	1	-	2	8	-	8	1	32	-	-	-	7	9	-	384	3	4	-	488
Wh-rump Sandpiper	-	-	-	-	2	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	6

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Mons	Montg	Putn	Roane	Ruther	Sevier	Shelby	Summer	Warr	Wms	Totals
Peep sp.	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	67
Pectoral Sandpiper	2	1	-	-	3	-	-	-	1	-	-	-	5	-	-	-	-	-	-	-	-	-	-	12
Dunlin	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	1	-	-	12
Short-bill Dowitcher	-	-	-	-	1	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	9
Long-bill Dowitcher	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Common Snipe	-	22	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	25
American Woodcock	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3	1	2	-	-	-	1	-	10
Ring-billed Gull	-	-	-	-	-	9	-	-	9	-	48	-	-	-	-	-	15	-	-	-	-	-	-	81
Herring Gull	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Caspian Tern	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	4
Forster's Tern	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	3
Black Tern	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	10
Rock Dove	44	29	2	-	4	84	7	13	60	-	21	31	6	-	40	75	4	4	8	72	25	2	-	531
Eurasian Collar. Dove	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Mourning Dove	73	20	19	4	16	24	12	26	305	4	78	50	17	25	140	203	5	10	20	71	-	4	44	1170
Black-billed Cuckoo	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Yellow-billed Cuckoo	-	1	1	-	2	9	1	3	3	-	7	2	5	1	4	4	-	5	-	26	-	-	7	81
Barn Owl	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	3
Eastern Screech-Owl	1	-	1	-	-	-	-	-	3	-	1	1	-	-	-	4	-	-	-	-	-	-	-	11
Great Horned Owl	-	-	2	-	2	-	-	-	1	-	1	-	-	-	3	1	-	-	-	1	-	2	-	13
Barred Owl	7	-	-	-	4	-	-	-	2	-	-	-	6	-	1	11	-	2	-	5	-	-	-	38
Common Nighthawk	3	1	-	3	3	1	2	-	6	-	6	2	12	-	5	8	1	-	-	34	-	-	-	87
Chuck-will's-widow	4	-	-	-	2	-	-	-	6	-	1	-	-	2	4	6	8	-	-	-	-	1	-	34
Whip-poor-will	-	-	-	-	15	-	-	-	9	-	-	-	-	2	4	17	10	-	-	-	-	-	-	57
Nighjar sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Chimney Swift	75	31	52	6	25	210	2	63	271	6	168	21	5	10	216	179	8	16	15	85	-	9	11	1484
Ruby-throated H'bird	4	-	1	-	5	5	1	2	15	-	2	2	21	1	19	16	4	1	-	26	-	1	5	131
Belted Kingfisher	1	3	3	-	2	5	1	2	12	-	5	1	-	-	12	4	2	-	-	5	-	1	-	59
Red-hd.Woodpecker	-	-	-	-	2	2	4	-	19	-	1	-	7	-	8	8	1	1	-	25	-	1	3	82
Red-bell.Woodpecker	44	3	6	2	4	19	6	6	58	-	11	9	15	8	51	54	16	6	-	71	-	2	18	409

North American Migration Count, May 8, 1999

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
Downy Woodpecker	8	1	4	2	1	11	3	3	50	-	4	4	5	4	19	20	3	2	1	20	-	2	3	170
Hairy Woodpecker	2	-	1	-	-	-	1	1	7	-	1	2	1	-	2	7	1	1	-	9	2	-	2	40
Northern Flicker	7	1	4	-	2	3	-	3	16	-	2	9	2	3	19	16	3	-	-	7	-	1	2	100
Pileated Woodpecker	7	2	5	-	3	10	-	2	18	1	3	3	4	7	10	26	3	1	5	21	-	1	3	135
Olive-side Flycatcher	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4
Eastern Wood-Pewee	13	4	7	-	5	13	3	3	20	1	5	7	12	5	37	52	6	4	2	89	-	3	10	301
Acadian Flycatcher	11	3	3	-	-	7	-	1	4	-	-	1	8	2	14	54	5	-	7	83	-	-	-	203
Willow Flycatcher	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Least Flycatcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Empidonax sp.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Eastern Phoebe	31	9	13	-	5	12	-	12	28	1	6	1	1	5	24	45	6	2	4	7	-	2	5	219
Great Cr. Flycatcher	12	1	9	2	2	8	-	13	40	2	1	5	18	3	34	55	6	8	-	39	-	3	2	263
Western Kingbird	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Scissor-tail Flycatcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Eastern Kingbird	17	2	7	1	14	17	7	8	122	15	28	3	20	45	95	71	7	20	3	39	-	8	12	561
Flycatcher sp.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Horned Lark	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2	1	-	-	29	-	-	-	36
Purple Martin	-	3	-	5	23	79	8	3	144	-	39	4	41	1	80	68	-	4	-	8	-	-	8	518
Tree Swallow	24	8	31	-	-	8	1	20	5	-	5	4	4	10	-	17	-	3	4	5	-	2	-	151
N. Rough-w. Swallow	22	7	12	-	15	17	4	11	105	-	10	11	2	9	159	52	6	4	22	20	15	2	2	507
Bank Swallow	-	-	-	-	-	-	-	-	6	-	7	-	1	-	1	2	-	-	-	-	-	-	-	17
Cliff Swallow	95	32	-	-	250	25	-	-	311	-	60	3	-	22	355	11	8	-	-	-	-	-	4	1176
Barn Swallow	60	41	19	-	8	25	4	37	254	4	70	26	20	24	197	153	14	15	55	50	5	9	14	1104
Swallow sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	5
Blue Jay	72	8	18	12	18	39	22	25	246	4	45	45	22	15	113	175	7	19	3	52	-	3	44	1007
American Crow	119	26	24	-	58	34	11	30	347	1	82	46	7	40	180	182	20	15	45	53	3	10	31	1364
Fish Crow	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	21	-	-	-	23
Common Raven	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Carolina Chickadee	47	8	9	4	5	36	4	12	176	2	27	32	22	16	88	88	19	5	8	38	-	2	17	665
Tufted Titmouse	53	2	7	6	9	33	8	14	153	4	22	26	20	17	68	106	21	8	5	76	2	7	21	688

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
Red-breast. Nuthatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2
Wh-breast. Nuthatch	8	1	1	-	7	3	-	2	15	1	1	4	2	2	16	36	4	1	1	17	-	1	5	128
Bwn-head. Nuthatch	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Brown Creeper	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4	-	-	-	-	5
Carolina Wren	37	9	16	2	2	34	6	9	148	2	17	30	24	18	95	113	10	10	17	89	-	3	6	697
House Wren	3	1	1	2	-	1	-	8	2	-	1	7	-	-	21	22	1	-	-	-	1	1	-	72
Winter Wren	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	5
Sedge Wren	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Marsh Wren	-	-	-	-	2	1	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	6
Gold-crown. Kinglet	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	3	-	-	-	-	5
Ruby-crown. Kinglet	-	-	-	-	-	2	-	1	-	-	-	3	-	-	-	1	-	-	-	2	-	-	-	9
Blue-gr. Gnatcatcher	66	4	14	-	16	42	-	6	141	-	23	10	37	25	39	130	8	15	4	79	1	6	5	671
Eastern Bluebird	109	22	19	-	18	24	11	33	181	1	48	17	3	14	155	201	10	18	36	26	1	15	34	996
Veery	-	-	-	-	-	3	-	-	2	-	-	2	2	-	2	3	-	1	-	2	-	-	1	18
Gray-cheeked Thrush	-	-	-	-	1	3	2	-	2	-	-	-	4	-	3	-	-	3	-	6	-	-	-	24
Swainson's Thrush	5	-	1	2	5	35	-	1	13	1	-	6	3	-	8	5	-	15	-	61	-	-	2	163
Hermit Thrush	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	4
Wood Thrush	53	1	12	2	8	5	5	-	44	1	6	12	2	13	24	78	21	4	8	52	-	-	3	354
American Robin	75	38	40	10	10	72	12	28	406	5	70	15	16	17	213	339	-	18	20	82	-	2	18	1506
Gray Catbird	8	1	3	10	3	3	2	2	15	-	6	5	4	5	10	33	4	2	2	13	-	-	3	134
N. Mockingbird	42	13	9	2	18	21	10	20	155	2	31	24	2	6	129	79	3	3	8	34	2	3	21	637
Brown Thrasher	14	9	8	2	6	4	5	14	73	2	15	10	3	2	29	47	1	6	9	13	-	5	11	288
American Pipit	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Cedar Waxwing	26	15	38	15	-	12	-	25	131	-	16	20	12	32	58	72	-	48	-	168	-	7	-	695
Loggerhead Shrike	1	-	-	-	1	-	-	1	-	-	3	-	2	-	4	-	-	-	-	3	-	1	1	17
European Starling	390	61	79	6	28	198	10	90	562	4	283	64	50	27	580	714	32	35	130	99	-	15	51	3508
White-eyed Vireo	19	2	2	-	12	18	2	4	53	1	5	1	12	5	25	105	14	6	2	67	3	2	15	375
Blue-headed Vireo	-	2	-	-	1	2	-	3	3	-	1	-	-	2	-	9	-	-	6	1	-	-	-	30
Yellow-throat Vireo	6	-	2	-	1	3	-	-	5	-	2	1	-	2	7	48	4	-	-	14	-	1	-	96
Warbling Vireo	-	-	-	-	3	2	-	1	-	-	-	-	2	-	17	1	-	2	-	2	1	-	-	31

North American Migration Count, May 8, 1999

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Morr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
Philadelphia Vireo	-	-	-	-	-	6	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	9
Red-eyed Vireo	66	9	41	1	11	44	-	11	176	2	21	46	7	38	34	453	28	21	41	76	1	4	10	1141
Blue-winged Warbler	3	-	-	-	-	2	-	-	3	-	-	-	-	-	-	18	5	-	-	1	-	-	3	35
Golden-wing Warbler	5	-	4	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	11
Tennessee Warbler	-	-	1	2	7	29	3	1	10	1	-	1	14	-	48	18	-	6	-	175	-	-	3	319
Orange-crownWarbler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Nashville Warbler	-	-	-	-	-	2	-	1	-	-	-	-	2	-	-	3	-	-	-	2	-	-	-	10
Northern Parula	4	1	-	-	5	7	-	1	4	2	1	1	7	3	15	34	4	-	3	39	-	-	1	132
Yellow Warbler	10	2	3	2	2	11	-	2	12	2	15	6	2	15	5	29	2	2	1	3	1	3	1	131
Chestnut-sideWarbler	15	-	6	-	1	15	-	1	4	-	2	15	5	24	7	8	2	-	4	16	-	2	-	127
Magnolia Warbler	11	-	2	-	15	34	-	3	10	-	1	10	4	4	4	16	17	3	-	13	-	-	2	149
Cape May Warbler	17	-	4	-	-	8	1	-	13	-	-	3	-	-	-	14	-	2	-	-	-	-	3	65
Blk-th. Blue Warbler	-	-	-	-	1	1	-	14	2	-	-	-	-	12	12	-	-	-	5	-	-	-	-	47
Yellow-rump Warbler	13	3	12	-	4	35	-	-	27	1	7	16	6	-	39	47	5	2	-	14	-	7	3	241
Blk-th. Green Warbler	12	3	22	-	-	10	-	7	20	-	1	19	3	11	2	16	2	1	24	5	-	-	-	158
Blackburnian Warbler	1	-	1	-	-	3	-	3	8	-	-	7	1	-	-	7	-	1	-	2	-	1	-	35
Yellow-throat Warbler	13	1	4	-	2	5	-	-	2	-	-	-	-	7	17	27	6	-	5	6	-	-	1	96
Pine Warbler	11	-	3	-	1	-	-	-	35	-	1	-	-	11	5	34	5	2	-	3	-	-	-	111
Prairie Warbler	12	-	1	-	9	-	-	-	81	-	1	5	-	3	15	67	15	12	2	-	1	1	4	229
Palm Warbler	1	1	2	-	10	10	-	-	27	-	-	-	4	2	35	7	-	9	-	1	1	-	-	110
Bay-breasted Warbler	12	-	1	-	-	9	-	-	3	-	-	9	-	-	2	6	-	5	-	4	-	-	-	51
Blackpoll Warbler	15	-	6	2	4	27	-	3	29	6	1	14	7	-	4	15	6	2	-	8	-	3	-	152
Cerulean Warbler	14	-	22	-	3	-	-	-	1	1	-	7	-	-	-	29	-	-	2	16	-	-	2	97
Blk & white Warbler	13	2	18	-	10	6	-	1	9	-	1	1	1	6	2	108	-	-	3	9	-	-	3	193
American Redstart	25	-	16	-	1	19	-	1	4	-	-	-	7	-	2	25	1	-	-	35	-	-	1	137
Protho. Warbler	1	-	1	-	3	5	1	2	7	2	-	-	21	-	28	-	4	5	-	18	-	-	1	99
Worm-eat. Warbler	1	2	4	-	8	3	-	-	8	-	-	2	-	2	1	26	-	-	-	-	-	-	-	57
Swainson's Warbler	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	9	-	-	-	11
Ovenbird	10	1	17	-	3	2	-	8	8	-	2	4	3	22	8	129	9	-	33	14	-	-	-	273
N. Waterthrush	-	-	1	-	-	1	-	-	1	-	-	1	1	1	2	-	1	1	-	-	-	1	-	11

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
La. Waterthrush	2	-	4	-	1	4	-	-	2	-	2	1	-	3	2	10	1	-	5	7	-	-	3	47
Kentucky Warbler	23	-	27	-	2	12	-	-	1	-	1	1	8	-	5	68	7	1	-	55	-	-	5	216
Mourning Warbler	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Common Yellowth.	36	8	8	-	14	27	3	11	50	1	19	15	34	26	54	233	14	21	7	31	1	5	10	628
Hooded Warbler	20	1	36	-	10	4	-	3	1	-	-	4	2	8	1	74	9	1	10	9	-	-	-	193
Wilson's Warbler	1	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	10
Canada Warbler	1	-	-	-	1	5	-	1	3	-	-	5	-	1	-	3	-	-	-	1	-	-	-	21
Yellow-breast Chat	26	7	3	-	8	15	-	3	97		5	6	1	21	16	91	16	6	3	5	1	1	14	345
Summer Tanager	11	-	2	-	16	9	2	1	16	1	10	-	4	1	20	55	1	14	-	50	-	2	15	230
Scarlet Tanager	29	1	40	-	6	8	-	3	29	-	1	13	-	7	4	50	16	9	6	12	-	-	12	246
Northern Cardinal	113	22	28	8	18	97	23	27	325	4	68	59	37	28	302	304	20	27	21	119	1	11	81	1743
Rose-br. Grosbeak	9	-	2	6	5	8	-	2	16	-	2	4	5	8	24	10	1	1	-	9	-	-	3	115
Blue Grosbeak	2	-	-	-	3	3	3	3	14	-	2	1	-	2	7	10	1	2	2	3	-	4	5	67
Indigo Bunting	97	16	56	-	35	102	7	34	223	2	102	55	61	110	162	566	36	43	65	296	1	19	54	2142
Dickcissel	-	-	-	-	2	-	-	1	-	-	-	-	114	-	16	-	-	-	-	86	-	-	-	219
Eastern Towhee	46	5	17	2	9	24	8	14	129	-	11	23	-	11	100	86	17	6	5	6	-	1	18	538
Amer. Tree Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Chipping Sparrow	10	5	5	-	6	-	-	2	47	1	5	4	-	-	47	190	2	-	8	6	-	3	1	342
Field Sparrow	26	-	4	-	4	53	3	4	58	1	21	3	4	2	70	86	11	16	5	3	2	8	33	417
Savannah Sparrow	4	-	-	-	25	-	-	3	10	-	-	2	-	2	8	1	9	1	-	13	-	1	-	79
Grasshoppr Sparrow	6	-	-	-	-	-	-	3	3	-	12	-	-	-	-	2	1	-	-	2	-	4	-	33
Fox Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Song Sparrow	83	11	48	-	6	-	-	24	140	-	26	33	-	4	1	185	18	-	45	-	3	3	-	630
Lincoln's Sparrow	-	-	2	-	-	3	-	-	-	-	-	-	5	-	-	-	-	-	-	3	-	-	-	13
Swamp Sparrow	-	-	-	-	2	1	-	1	-	-	-	-	-	1	2	1	-	-	-	-	-	1	-	9
White-th. Sparrow	6	-	1	6	1	5	-	-	3	1	5	-	2	-	7	4	-	-	-	7	-	-	3	51
White-cr. Sparrow	-	1	-	-	4	-	-	-	-	-	11	-	3	-	6	-	-	1	-	-	-	-	-	26
Dark-eyed Junco	-	-	-	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	10	-	-	-	-	19
Bobolink	6	-	-	-	14	-	-	-	5	-	12	-	18	-	-	5	-	-	-	685	-	-		745
Red-wing Blackbird	85	34	15	-	55	76	4	53	178	10	119	21	200	32	329	239	42	11	85	185	5	10	10	1798

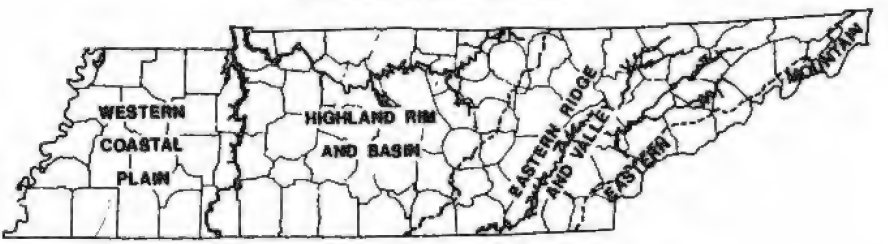
North American Migration Count, May 8, 1999

	And	Blnt	Camp	Carr	Cheat	David	Fayt	Greene	Hmlt	Henry	Jeff	Knox	Lake	Monr	Montg	Putn	Roane	Ruther	Sevier	Shelby	Sumner	Warr	Wms	Totals
E. Meadowlark	43	28	9	-	9	15	8	29	120	-	68	10	12	8	157	194	12	5	19	26	-	20	11	803
Common Grackle	90	24	41	4	26	105	40	59	241	8	232	29	79	44	192	166	4	8	30	74	12	1	36	1545
Brown-hd. Cowbird	41	4	7	6	15	50	1	12	74	6	83	13	27	3	106	158	3	12	8	81	-	2	20	732
Orchard Oriole	13	2	9	-	4	12	-	10	18	2	2	4	3	3	9	55	2	8	2	14	-	3	6	181
Baltimore Oriole	2	-	1	-	-	3	1	1	3	-	-	4	16	1	1	3	-	-	-	20	-	-	2	58
House Finch	39	11	10	7	2	9	2	10	88	3	16	19	-	-	129	32	1	2	8	9	-	-	8	405
Red Crossbill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4
Amer. Goldfinch	68	14	29	-	12	54	5	2	176	-	17	21	6	8	151	103	18	12	43	20	-	2	23	784
House Sparrow	35	7	30	2	20	6	3	7	40	-	45	-	32	2	146	115	3	1	5	8	20	-	-	527
Total Species	120	95	104	33	125	121	61	104	157	46	116	103	130	92	132	130	99	99	76	140	41	76	85	213
Total Individuals	3198	877	1239	148	1308	2403	353	1082	8729	140	2515	1166	1578	1040	6268	8429	780	770	1020	5214	504	312	940	50013
Observers/parties	6-3	3-1	1-1	2-1	2-1	19 obs	2-1	4-2	30 obs	2-1	4-2	22-3	1-1	1-1	13-6	15-6	2-1	2-1	2-1	24 obs	1-1	2-1	6 obs	-
Party Hours	33.9	12.5	13.5	4	16	28.75	5	15	-	5	16	23 75	13.9	15.5	98.25	74.5	10	13.5	10.5	44	3	4	15.5	476.05
Hours by car	24.6	8	10	-	11	8.25	2.25	10.5	-	4	12	6	3	4	-	59.5	2	1.5	8.5	19.5	0.5	0.5	8.5	204.1
Hours by foot	5.8	4.6	305	-	5	20.5	1.75	4	-	1	3	17.75	10.9	11.5	-	15	8	12	2	24.5	2.5	3.5	7	465.3
Hours at feeders/yds	2	-	-	4	-	-	1	0.5	6.5 owl	-	1	2.4	-	-	13.5	3 owl	2 owl	-	-	-	-	1 owl	-	-
Miles by car	206	109	137	-	151	48.5	51	157	809	-	142	52	64	150.7	893.6	501	10	30	140	82.4	0 5	8	51	3793.7
Miles by foot	5.3	7	3.5	-	5	16	1.5	305	38	-	4	8.5	3	8	31.25	10	8	7	2.5	18	5 5	3	6	496.05
Temp. (deg F)	50-78	58-75	50-80	80	55-78	50-80	50-80	55-75	60-75	80	55-75	55-78	78	-	51-78	51-75	55-75	50-80	58-75	56-72	75	60-70	50-80	-
Count times	0500 -2200	0740 -2015	0700 -2030	- -	0500 -2100	0600 -1900	0600 -1100	0835 -1845	0350 -2200	1000 -1500	0600 -2200	0635 -1900	0350 -1945	- -	- -	- -2000	0400 -1500	0500 -1830	0500 -1730	0700 -1730	0700 -1900	1330 -1100	0700 -	- -

The Migrant, 70 (1) 45-56, 1999.

THE SEASON

RICHARD L. KNIGHT, Editor



FALL: 1 AUGUST - 30 NOVEMBER 1998

The weather this autumn was warmer and dryer than usual all across the state. While conditions seemed favorable for the migrants to proceed, they were likewise conducive for birders to get out and observe. The numbers and diversity of migrants seemed good.

Numerous rarities were reported. Eared Grebes were sighted in all four regions. Another Neotropic Cormorant was found near the Mississippi River. Ross's Geese occurred in all but the mountain region. Nashville's Calliope Hummingbird returned. Three Rufous Hummingbirds and four Selasphorus sp. also appeared. Remarkably, Bell's Vireo was reported three times, twice in the western region and once in middle Tennessee. A Western Tanager was sighted in the northeastern mountains.

Among regular migrants, long-legged waders seemed to be in good numbers. The mild weather apparently caused waterfowl to linger later than usual to our north. Shorebirds staged another impressive flight. Warblers moved through in respectable numbers. Boreal irruptives were nearly non-existent. The regional accounts contain much more of interest.

STANDARD ABBREVIATIONS

ad - adult	max - maximum count
b - banded	m.ob. - many observers
Co - County	Mtn - Mountain
ers - earliest reported sighting	n,e,s,w - compass directions
et al. - and others	NWR - National Wildlife Refuge
f - female	R - River
im - immature	S.P. - State Park
L - Lake	WMA - Wildlife Management Area
lrs - latest reported sighting	yg - young

WESTERN COASTAL PLAIN REGION: The season began with biweekly field trips to Shelby Forest State Park and the EARTH Complex. High temperatures and a lack of rain for eight weeks did not provide the migrants with many watering holes. Highlights included Neotropic Cormorant, American Bittern, Fulvous Whistling-Duck, Red-necked Phalarope, Long-eared Owl, two reports of Bell's Vireo, and a Lawrence's Warbler.

Several state and regional records were set this season. Eared Grebe set an early state arrival record. American Avocet and Acadian Flycatcher set late state departure records. Least Flycatcher, Swainson's Thrush, Blue-headed Vireo, Philadelphia Vireo, and Bay-breasted Warbler set early arrival dates for West Tennessee, while Warbling Vireo set a late departure date. A new state high count was established by 174 Stilt Sandpipers in Dyer County.

Arrival of waterfowl was later than usual, although a total of 22 species were reported. A total of 26 species of shorebirds were recorded, with the peak of migration occurring in the third week of August. Twenty-eight species of warblers were recorded, generally in good numbers. The warbler migration was marked with two peak waves during the first and fourth weeks of September. For additional information about species not mentioned, contact the regional compiler.

Loon-Ibis: **Red-throated Loon:** 21/27 Nov (1) Pace Point/Big Sandy (MAG, FCF, GAF, CAS, JRW). **Horned Grebe:** 1 Nov (3) Britton Ford WMA (MTOS); 31 Oct/27 Nov (12/33) Pace Point/Big Sandy (MAG, JRW); 26-27 Nov (17) Reelfoot L, Lake & Obion Cos (WGC). **Eared Grebe:** 10-23 Aug (2) Shelby Farms (CHB, VBR), early state; 14 Oct (2) Reelfoot L, Lake Co (WGC). **American White Pelican:** 1-10 Aug (164 max) Phillipy (WGC, LVZ, JAZ); 27 Sep - 30 Nov (500 max) Dyer Co (WGC); 23 Oct (135) e Memphis (SNM). **NEOTROPIC CORMORANT:** 5 Sep (1 im) Phillipy (MAG). **American Bittern:** 7 Sep (1) Shelby Farms (CHB, VBR, MGW, JAZ); 10 Oct (1) Black Bayou WMA; 19 Oct (1) Whites Lake WMA (WGC). **Great Egret:** 25 Nov (2) Dyer Co (WGC); 25 Nov (1) Shelby Co (CHB, VBR, MGW); lrs. **Tricolored Heron:** 15 Aug (1) Eagle Lake WMA (MAG, JRW); 28 Aug - 17 Sep (1 ad, 3 im) Whites Lake WMA (WGC, MAG). **Black-crowned Night-heron:** 1 Aug - 27 Nov (70+) Dyer Co (WGC, MAG); 15 Aug (2) Eagle Lake WMA (JAZ, LVZ). **Yellow-crowned Night-heron:** 24 Aug (1 im) Hwy 103 & Great River Rd., Dyer Co (WGC); 5 Sep (1) Phillipy (MAG); 12 Sep (1) EARTH Complex (MTOS). **White Ibis:** 5 Sep (1 im) Phillipy (MAG); 12/17 Sep (1 im) Whites Lake WMA (WGC, MAG).

Duck-Crane: **Fulvous Whistling-Duck:** 10 Aug (1) Black Bayou WMA (RLK), 4 were reported there in May. **Ross's Goose:** 25/27 Nov (7 max) Lauderdale WMA, Lauderdale Co (WGC, MAG); 27 Nov (2) Britton Ford WMA (MAG, JRW). **Oldsquaw:** 11 Nov (1 f) Bunge Rd & Great River Rd, Dyer Co (WGC). **Surf Scoter:** 27 Nov (7) Midway, Dyer Co (MAG, JRW). **Osprey:** 17 Sep - 23 Oct (1) Whites Lake WMA (WGC); 1 Oct (1) Dyer Co (WGC); 14 Oct (1) MLK Park, Memphis (CHB, SCF, SSL, VBR); 4 Nov (1) Hatchie NWR, Haywood Co (CHB, SCF, SSL, VBR, Barbara Wilson). **Bald Eagle:** 20 Nov (2 ad on nest) Heloise (WGC). **Sharp-shinned Hawk:** (2) Tipton Co, (2) Shelby Co, (2) Henry Co, (1) Hardeman Co, (1) Dyer Co.

Cooper's Hawk: (2) Dyer Co, (2) Lake Co, (8) Shelby Co, (1) Madison Co. **Golden Eagle:** 2 Nov (1 im) Tennessee NWR, Benton Co (MAG, FCF, GAF, CAS, JRW). **Merlin:** 12/14 Oct (1) Memphis (WRP, JEW, MGW); 29 Oct (1) EARTH Complex (CHB, MGW). **Peregrine Falcon:** 5 Sep (1) Eagle Lake WMA (CHB, WRP); 7 Sep (1) Shelby Farms (CHB, VBR, MGW, JAZ); 12 Sep (1 ad) Whites Lake WMA (WGC, MAG); 17 Sep (1) Heloise (WGC); 29 Oct - 5 Nov (1) Memphis (David Baylock). **King Rail:** 10 Aug (1 ad, 3 yg) Black Bayou WMA (WGC), max. **Sora:** 25 Oct (1) Whites Lake WMA (WGC). **Sandhill Crane:** 17 Nov (3) Chickasaw NWR, Lauderdale Co (Mike Stroh); 27 Nov (30) Hop In WMA, Obion Co (SNM, MGW); 27 Nov (3) Britton Ford WMA (MAG, JRW); 30 Nov (1) Whites Lake WMA (WGC).

Shorebirds: Biweekly field trips to the EARTH Complex continued throughout the season. Many of the shorebirds were confined to several large sludge ponds. It was not easy to estimate the number of birds using the area since the ponds were not always accessible for viewing. The loss of several settling ponds reduced the foraging/staging area about 50%; however, in comparison to earlier counts, the number of shorebirds using the area was not affected. Observers were: CHB, DDP, WRP, VBR, JAZ, LVZ, MTOS. **Black-necked Stilt:** 2 Aug - 6 Sep (25 ad, 9 im) EARTH Complex; 19 Aug - 12 Sep (17 max) Dyer Co (WGC); 1 Sep - 1 Oct (21 max) Hwy 79 & Great River Rd., Lake Co; 19 Sep (3 ad, 1 im) Eagle Lake WMA (VBR). **American Avocet:** 25 Oct - 30 Nov (1) Whites Lake WMA (WGC), late state. **Willet:** 21-31 Aug (9 max) Shelby Farms (CHB, DDP, VBR, JAZ, LVZ); 23 Aug (1) EARTH Complex (DDP). **Upland Sandpiper:** 16 Aug (3) Dyer Co (WGC); 16 Aug (1) EARTH Complex; 4 Sep (4) Shelby Farms (VBR). **Ruddy Turnstone:** 5 Sep (1) Tiptonville, Lake Co (MAG); 11 Sep (1) Shelby Farms (VBR). **Sanderling:** 23 Aug (2) Ed Davis Fish Farm (MAG); 15/25 Aug (1) EARTH Complex; 4/5 Sep (1) Shelby Farms (CHB, VBR, WRP); 5 Sep (10) Tiptonville, Lake Co (MAG). **Baird's Sandpiper:** 15/23 Aug (2) EARTH Complex (DDP); 23 Aug (12) Ed Davis Fish Farm (MAG); 29 Aug (3) Hwy 79W, Lake Co (WGC); 5 Sep (2) Whites Lake WMA; 5 Sep (6) Phillipy (MAG); 5 Oct (2) Heloise (WGC). **Pectoral Sandpiper:** 2 Aug - 25 Oct (2200 max) EARTH Complex; 29 Aug (1000+) Black Bayou WMA (WGC). **Stilt Sandpiper:** 2 Aug - 27 Sep (21 max) EARTH Complex; 28 Aug - 7 Sep (72 max) Phillipy; 28 Aug - 2 Nov (60 max) Whites Lake WMA; 21 Sep - 9 Oct (174 max on 21 Sep) Heloise (WGC), state high count. **Buff-breasted Sandpiper:** 1 Aug/5 Sep (4 max) Shelby Farms (CHB, DDP, VBR, WRP); 16 Aug - 2 sep (5 max) Dyer Co (WGC); 15 Aug - 6 Sep (5) EARTH Complex; 25 Aug - 22 Sep (8 max) Black Bayou WMA/Phillipy (WGC, MAG); 23 Aug (4) Ed Davis Fish Farm (MAG); 1-7 Sep (6 max) Hwy 79W & Great River Rd, Lake Co (WGC). **Short-billed Dowitcher:** 15 Aug (3) Eagle Lake WMA (MAG, JRW); 23 Aug (1) EARTH Complex. **Long-billed Dowitcher:** 5 Sep (2) Black Bayou WMA (MAG). **Dowitcher sp.:** 1 Aug - 22 Sep (16) Lake Co; 15 Aug - 30 Nov (45 max) Dyer Co (WGC). **Wilson's Phalarope:** 15 Aug (1) Eagle Lake WMA (JAZ, LVZ); 15/26 Aug (1) EARTH Complex (MAG, JRW/RLW); 12/16 Sep (2) Hwy 79W & Great River Rd, Lake Co; 21/22 Sep (2) Whites Lake WMA (WGC); 9 Nov (1) Shelby Farms (VBR). **Red-necked Phalarope:** 5 Sep (3) Black Bayou WMA (WGC, MAG).

Gull-Hummingbird: **Bonaparte's Gull:** 31 Oct (15) Pace Point (MAG); 1 Nov (9) Britton Ford WMA (MTOS); 25/30 Nov (27 max) Dyer Co (WGC); 29 Nov (3) EARTH Complex (CHB, MGW). **Lesser Black-backed Gull:** 21 Nov (1 ad) Pace Point (MAG, FCF, GAF, CAS, JRW). **Forster's Tern:** 12 Aug (1) Shelby Farms (CHB, VBR); 23 Aug (1) Ed Davis Fish Farm (MAG). **Common Ground-Dove:** 25 Oct (1) EARTH Complex (MGW). **Black-billed Cuckoo:** 3/11 Sep (1) Shelby Forest SP (DDP). **Barn Owl:** 1 Aug (1, road kill) Hwy 78, Dyer Co (WGC); 14 Aug/19 Oct (1) Memphis (Knox Martin). **Long-eared Owl:** 27 Nov (2) West Sandy Creek WMA, Henry Co (MAG, JRW). **Common Nighthawk:** 28 Nov (1) Memphis (CHB), lrs. **Selasphorus sp.:** 3 Nov (1) Memphis (Van Harris).

Flycatcher-Thrush: **Yellow-bellied Flycatcher:** 11 Sep (1) Memphis (JEW, MGW). **Acadian Flycatcher:** 25 Oct (1) Shelby Forest SP (MTOS), late state. **Willow Flycatcher:** 4-13 Sep (1) Shelby Forest SP (CHB, DDP, MTOS). **Least Flycatcher:** 2 Aug/3 Sep (1) Black Bayou WMA (JAZ, LVZ), early w Tenn.; 3-29 Sep (1) Shelby Forest SP (DDP). **BELL'S VIREO:** 9 Aug (1) Black Bayou WMA (RLW); 11 Sep (1) Shelby Forest SP (DDP). **Blue-headed Vireo:** 31 Aug (1) Shelby Farms (DDP), early w Tenn.; 11 Oct (2) Wolf River WMA (MTOS); 17 Oct (1) Memphis (VBR). **Warbling Vireo:** 11 Oct (1) Eagle Lake WMA (DDP), late w Tenn. **Philadelphia Vireo:** 2-29 Sep (6 max) Shelby Forest SP (DDP, MTOS), early w Tenn; 20 Sep (3) Fort Pillow SP, Lauderdale Co (MTOS). **House Wren:** 30 Sep/2 Oct (2) Shelby Forest SP (DDP); 4/11 Oct (2) Wolf River WMA (SNM, MTOS); 10 Oct (1) Shelby Forest SP (WRP). **Sedge Wren:** 19 Oct (1) Shelby Farms (VBR); 7 Nov (1) Wolf River WMA (MTOS). **Swainson's Thrush:** 2/7 Sep (2) Shelby Forest SP (DDP), early w Tenn.

Warbler-Bobolink: **Blue-winged Warbler:** 15 Aug (1) Eagle Lake WMA (MAG, JRW); 3-28 Sep (10 max) Shelby Forest SP (DDP). **Golden-winged Warbler:** 3-29 Sep (12 max) Shelby Forest SP (DDP). **"LAWRENCE'S" WARBLER:** 11 Sep (1) Shelby Forest SP (DDP). **Cape May Warbler:** 4 Sep (1) Shelby Forest SP (DDP). **Bay-breasted Warbler:** 31 Aug (1) Shelby Farms (VBR), early w Tenn. **Cerulean Warbler:** 30 Sep (1) Shelby Forest SP (DDP). **Mourning Warbler:** 11 Sep (1) Munford, Tipton Co (DDP). **Grasshopper Sparrow:** 2 Aug (1) w of Ridgely, Lake Co (LVZ, JAZ). **Lapland Longspur:** 27 Nov (400+) Bessie Bend, Lake Co (MAG, JRW). **Bobolink:** 15 Aug (1) Eagle Lake WMA (MAG, JRW, JAZ, LVZ).

Locations: Big Sandy - in Benton Co; Black Bayou WMA - in Lake Co; Britton Ford WMA - in Henry Co; Eagle Lake WMA - in Shelby Co; EARTH Complex - in Shelby Co; Ed Davis Fish Farm - in Gibson Co; Heloise - in Dyer Co; Pace Point - in Henry Co; Phillipy - in Lake Co; Shelby Farms - in Shelby Co; Shelby Forest SP - in Shelby Co; Whites Lake WMA - in Dyer Co; Wolf River WMA - in Fayette Co.

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HIGHLAND RIM AND BASIN REGION: The four-month fall period produced warmer than normal temperatures and drought conditions for the Nashville area. While August was near normal for both temperature and rainfall, almost the entire

month's precipitation fell on a single day, 16 August. Of the remaining three months, September was the warmest, 5 degrees above the average, while October and November were not far behind. For the last three months of the period, rainfall was a total of 6 inches below normal (60% below average amount).

The Calliope Hummingbird, initially seen and banded last year in an east Nashville yard, returned to the same location on 4 November. At least two other western hummingbirds arrived in middle Tennessee, as well. A Brewster's Warbler was seen during two days at Radnor Lake and was viewed by numerous birders on an NTOS walk. Unlike last fall, no significant invasion of finches or Red-breasted Nuthatches occurred in the region; there were only two reports of Purple Finches in the Nashville area. A Bell's Vireo was just the second for middle Tennessee.

Loon-Duck: **Common Loon:** 16 Nov (100) Center Hill L (SJS), max. **Horned Grebe:** 14 Oct (21)/16 Nov (210) Center Hill L (SJS), ers/max; 26 Nov (32) Radnor L (JF). **Eared Grebe:** 26 Nov (1) Radnor L (JF). **Great Egret:** 8 Aug (15) Gallatin Steam Plant (CAS); 21 Sep (14) Shelby Bottoms (Mark Hackney). **Snowy Egret:** 8 Aug (1) Gallatin Steam Plant (CAS). **Greater White-fronted Goose:** 14 Nov (1) Monsanto Ponds (NTOS); 28-30 Nov (1 im) Putnam Co (BHS, SJS, Winston Walden, Daniel Combs), 1st Co record. **Snow Goose:** 30 Sep (1 blue) Gallatin Steam Plant (TJW), early. **Ross's Goose:** 26-30 Nov (1 im) Putnam Co (BHS, SJS, Daniel Combs), 1st Co record. **Blue-winged Teal:** 21 Sep (177) Radnor L (FCF), max. **Greater Scaup:** 26 Nov (1) Radnor L (JF), ers. **Surf Scoter:** 23 Oct (6) Center Hill L (SJS, BHS). **Hooded Merganser:** 23 Oct (2)/24 Nov (80) Franklin Reservoir, Williamson Co (Elizabeth O'Connor), ers/max. **Ruddy Duck:** 12 Oct (1) Franklin Reservoir, Williamson Co (DWD, Elizabeth O'Connor), ers.

Falcon-Woodcock: **Merlin:** 30 Sep (1) Putnam Co (SJS, GKE, Michael Breen); 2, 6 Nov (1 m, 1 f) Percy Priest L, Davidson Co (PDC, SSH, NTOS). **Peregrine Falcon:** 6 Nov (1) downtown Nash (Sabin Thompson). **Ruffed Grouse:** 20 Oct (1) Icy Cove, Putnam Co (SJS, Michael Sanders). **Virginia Rail:** 2 Oct (1) Davidson Co (Sam & Nancy Craddock), in bushes next to house. **Sora:** 11 Sep (1) Gallatin Steam Plant (CAS); 16 Oct (1) Monsanto Ponds (MO). **Sandhill Crane:** 18/20/26 Nov (20/27/40) Putnam Co (Graham Kash/SJS/Michael Breen). **Greater Yellowlegs:** 20 Nov (1) White Co (SJS), lrs. **Sanderling:** 15 Aug (1) Cross Creeks NWR, Stewart Co (SSH, NTOS); 31 Aug (1) Rutherford Co (TJW), 1st Co record. **Dunlin:** 20 Nov (1) White Co (SJS). **Buff-breasted Sandpiper:** 23-31 Aug (1-3) pond at I-24/I-840 jct., Rutherford Co (TJT, Eric Lichtwardt), 1st Co record. **Short-billed Dowitcher:** 15 Aug (1) Cross Creeks NWR, Stewart Co (SSH, NTOS). **American Woodcock:** 19 Sep (1) Radnor L (FCF, MAZ, Doug Dorer); 3 Oct (1) Shelby Bottoms (PDC, MAZ).

Gull-Sapsucker: **Ring-billed Gull:** 18 Aug (1) Pennington Bend (MLM), ers. **Caspian Tern:** 8 Aug (6) Gallatin Steam Plant (CAS). **Least Tern:** 8 Aug (1) Gallatin Steam Plant (CAS). **Black Tern:** 8 Aug (11) Radnor L (Hazel Cassel, DWD, SSH); 14 Aug (1) Cane Creek Park, Putnam Co (SJS), 3rd Co record. **Ringed Turtle-Dove:** 15 Nov (1) Pennington Bend (MLM), an escapee. **Eurasian Collared-Dove:** 8 Oct (2)

Rutherford Co (TJW), near where seen in July. **Common Nighthawk:** 20 Sep (830) Nash (Hazel Cassel), max; 22 Nov (9) Vanderbilt Stadium, Nash (Jim & Sharon Heitt, CAS), lrs. **Ruby-throated Hummingbird:** mid Aug (50) Cheatham Co (Richard Johnson), max; 29 Oct (1) Putnam Co (BHS, SJS), record late in Co. **Calliope Hummingbird:** 4 Nov thru season (1 f) Nash (Ed & Evelyn Wright, m.ob.), return of bird banded last winter. **Rufous Hummingbird:** 24 Nov (1 m, b) Murfreesboro, Rutherford Co (Sarah Richards, PRM, CAS); 26 Nov (1 f, b) Nash (PRM, CAS, Jan & Van Williams). **Selasphorus sp.:** 12-26 Nov (1 im or f) Putnam Co (BHS, SJS), 1st Co record. **Yellow-bellied Sapsucker:** 29 Sep (1) Pennington Bend (MLM), ers.

Flycatcher-Robin: **Olive-sided Flycatcher:** 4 Sep (1) Shelby Park (PDC, SSH, MAZ). **Yellow-bellied Flycatcher:** 24 Sep (1) Radnor L (PDC, DWD, FCF). **"Traill's" Flycatcher:** 23 Sep (1) Radnor L (PDC, FCF, SSH). **Least Flycatcher:** 2 Sep (1) Shelby Park (PDC). **Blue-headed Vireo:** 31 Oct (1) Shelby Park (PDC); 2 Nov (1) Nash (JA); 14 Nov (1) Nash (FCF), lrs. **BELL'S VIREO:** 2 Oct (1) Tullahoma, Coffee Co (Glen Estep). **Warbling Vireo:** 9 Sep (1) Radnor L (FCF) & (1) Shelby Park (PDC, Jan Shaw). **Philadelphia Vireo:** 15 Sep (1) Radnor L (FCF). **Northern Rough-winged Swallow:** 11 Oct (3) Shelby Park (PDC), ties Nash late date. **Red-breasted Nuthatch:** 11 Sep (1) Pennington Bend (MLM); mid Nov (2) Nash (Wanda Shotwell); only reports. **Brown Creeper:** 14 Sep (1) Pennington Bend (MLM), ers. **Winter Wren:** 11 Oct (3) Shelby Bottoms (PDC, MAZ), ers. **Sedge Wren:** 22 Sep (2) Radnor L (FCF); 11 Oct (1) Shelby Bottoms (PDC, MAZ); 16 Oct (2) Monsanto Ponds (MO). **Marsh Wren:** 16 Oct (1) Monsanto Ponds (MO). **Ruby-crowned Kinglet:** 10 Sep (1) Pennington Bend (MLM) & (2) Shelby Park (PDC, FCF), 1 day shy of tying early Nash date. **Veery:** 27 Aug (1) Nash (JA), ers. **Swainson's Thrush:** 2 Sep (1) Shelby Park (PDC), ers. **American Robin:** 21 & 22 Oct (separate partial albinos) Nash (Richard Barchet, Carl Berkowitz).

Warblers: **Blue-winged Warbler:** 16 Sep (6) Radnor L (FCF), max. **Golden-winged Warbler:** 7 Sep (1) Radnor L (FCF, NTOS), ers; 23 Sep (6) Radnor L (PDC, FCF, SSH), max; 25 Sep (1) Center Hill L (BHS, SJS). **"Brewster's" Warbler:** 22-23 Sep (1) Radnor L (FCF, NTOS). **Tennessee Warbler:** 2 Sep (1) Shelby Park (PDC) & (1) Pennington Bend (MLM), ers; 1 Nov (1) Shelby Park (PDC), lrs. **Orange-crowned Warbler:** 21 Sep (1) Radnor L (PDC, FCF); 11 Oct (1) Shelby Bottoms (PDC, MAZ); 15 Oct (1) Pennington Bend (MLM); 22 Oct (1 b) Radnor L (PRM, CAS). **Nashville Warbler:** 2 Sep (1) Shelby Park (PDC), ers; 3 Oct (11) Shelby Park (PDC, MAZ), max. **Magnolia Warbler:** 25 Aug (3) Shelby Bottoms (PDC, SSH), ers; 27 Aug (1) Nash (JA); 28 Aug (1) Radnor L (Ed Byrne). **Black-throated Blue Warbler:** 15 Oct/22 Nov (1 m/1) Pennington Bend (MLM). **Yellow-rumped Warbler:** 23 Sep (1) Radnor L (FCF), ers. **Black-throated Green Warbler:** 13 Aug (1) Nash (Jane DiPietro), ers. **Palm Warbler:** 22 Nov (1) Shelby Bottoms (PDC); 26 Nov (1) Coffee Co (Erma Rogers); 29 Nov (1) Nash (Dee Thompson). **Bay-breasted Warbler:** 8 Sep (2) Shelby Park (PDC), ers. **Blackpoll Warbler:** 14 Oct (1) Radnor L (PDC, Jan Shaw, DWD), rare in fall. **Ovenbird:** 24 Oct (1) Pennington Bend (MLM), lrs. **Connecticut Warbler:** 15 Oct (1 m) Bellevue, Nash (FCF). **Mourning Warbler:** 22 Sep (1 im) Pennington Bend (MLM).

Wilson's Warbler: 27 Aug (2) Shelby Park (PDC), ers; 10 Sep (3) Shelby Park (PDC, FCF), max. **Canada Warbler:** 25 Aug (1) Shelby Bottoms (PDC, SSH); 27 Aug (1) Nash (JA) & (1) Shelby Park (PDC).

Sparrow-Finch: **Henslow's Sparrow:** 24 Oct (1) Warren Co (SNM). **Grasshopper Sparrow:** 24 Oct (1) Warren Co (SNM). **Fox Sparrow:** 29 Oct (1) Nash (JA), ers. **Lincoln's Sparrow:** 18 Oct (3) Shelby Park (PDC). **White-throated Sparrow:** 30 Sep (1) Radnor L (Rita Venable), ers. **White-crowned Sparrow:** 3 Oct (1) Pennington Bend (MLM), ers. **Rose-breasted Grosbeak:** 6 Sep (1) Pennington Bend (MLM), ers. **Brewer's Blackbird:** 18 Nov (4) Old Mill Rd., Putnam Co (SJS, GKE). **Purple Finch:** 15 Nov (1) Cheatham Co (Joe Stone); 20 Nov (1) Coffee Co (Erma Rogers); only reports.

Locations: Center Hill L - in DeKalb Co; Gallatin Steam Plant - in Sumner Co; Monsanto Ponds - in Maury Co; Nash - Nashville; Pennington Bend - in Davidson Co; Radnor L - in Davidson Co; Shelby Bottoms - in Davidson Co; Shelby Park - in Davidson Co.

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CUMBERLAND PLATEAU/RIDGE AND VALLEY REGION: This autumn was generally warm and very dry. Temperatures were seasonal to slightly above average. Rainfall was deficient each month, with the seasonal total at just over half (52-53%), the usual amount at both Chattanooga and the Tri-cities.

Highlights were numerous during this migrational season. Red-necked and Eared Grebes made brief appearances. Waders continued their strong showing. Snow Goose numbers must surely have been at record levels for this region. A Ross's Goose in northeast Tennessee was the first record for that area. Record totals for Golden Eagle and Merlin were tallied at the lone regional hawkwatch; however, numbers of Broad-winged Hawks were rather low. An impressive shorebird flight occurred, highlighted by Marbled Godwit (second year in a row), Red Phalarope, and up to 20 Buff-breasted Sandpipers (surely a regional record) at Rankin Bottoms. A Nelson's Sharp-tailed Sparrow was the best passerine. Boreal irruptives were scarce.

Loon-Ibis: **Common Loon:** 15 Nov (83 flying over) Soddy Mtn (WGH); 15 Nov (1) Greene Co (DHM), unusual there; 16 Nov (158) Chick. L (KAC), max. **Horned Grebe:** 16 Nov (51) Chick. L (KAC), max. **Red-necked Grebe:** 15 Nov (1) Chick. L (LAW). **Eared Grebe:** 26 Sep (1) Boone L, Sullivan/Washington Cos. (Joy & Mark Crass); 25 Oct (1) Cherokee L (KDE). **Double-crested Cormorant:** 16 Nov (8) Kinser Park (JBH). **Great Egret:** 19 Aug (120+) Rkn Bot (KDE), max; 27 Sep (16) Greene Co (DHM). **Snowy Egret:** 8/20 Aug (1) Ktn Stm Pl (DJT, KDE/John Moyle); 19-22 Aug (1) Rkn Bot (KDE et al.). **Little Blue Heron:** 8 Aug (11) Bra Lev (KAC), max; 8-19 Aug (1-3 im) Kinser Park (DHM); 12 Aug (2 im) Eagle Bend Fish Hatchery, Anderson Co (KDE); 19-31 Aug (1-5 im) Rkn Bot (KDE et al.). **Cattle Egret:** 16 Aug (8) Ktn Stm Pl (DJT et al.); 19-23 Aug (25-50) Rkn Bot (KDE et al.). **Black-crowned Night-heron:** 9

Aug (30) Ft. Loudoun Dam, Loudon Co (DJT et al.); 19 Aug (5) Kinser Park (DHM). **White Ibis:** 6/9 Aug (1 im) Kyker Bottoms, Blount Co (Bill Smith/DJT et al.); 22-31 Aug (1-11 im) Rkn Bot (KDE, RDH, DM et al.); 27 Aug (1 im) Bra Lev (KAC, LAW). **Glossy Ibis:** 27-28 Aug (1) Bra Lev (KAC et al.).

Goose-Crane: **Snow Goose:** 15-27 Nov (14 white, 5 blue) Cherokee L (KDE); 15 Nov (37 flying over) Soddy Mtn (WGH); 15-22 Nov (1) Bra Lev (Janice Chadwell et al.); 18/22/29 Nov (20/29/45) Hiwassee Refuge, Meigs Co (Doug Geren/KAC/Roi Shannon); 21-27 Nov (12 blue, 3 white) Greene Co (DHM). **Ross's Goose:** 20-24 Nov (1) near Gray, Washington Co (Kevin Pierce, RLK), first local record. **Blue-winged Teal:** 9 Aug (1) Ktn Stm Pl (DJT et al.), ers. **Northern Shoveler:** 22 Aug (1) Ktn Stm Pl (KTOS); 23 Aug (1) Rkn Bot (KTOS); ers. **Hooded Merganser:** 25 Nov (194) Ktn Stm Pl (JDJ), max. **Red-breasted Merganser:** 27 Nov (49) Cherokee L (KDE); 28 Nov (42) Chick. L (LAW, Janice Chadwell). **Ruddy Duck:** 16 Nov (70) Kinser Park (JBH). **Osprey:** 18 Nov (1) Soddy Mtn (WGH); 20 Nov (1) Chick. L (Dennis & Gwen Harris); both late. **Bald Eagle:** 23 Aug (2 ad) Rkn Bot (KTOS). **Northern Harrier:** 23 Aug (1) Rkn Bot (KTOS), ers; 21 Nov (14) Mohawk, Greene Co (DHM), max. **Golden Eagle:** 11/15/21 Nov (1 each day) Soddy Mtn (WGH). **Merlin:** 31 Aug (1) Rkn Bot (RDH, DM), early; 5 Oct (1) Ktn Stm Pl (Audrey Hoff); 27 Oct (1) Meigs Co (Roi Shannon). **Peregrine Falcon:** 5 Sep/1 Nov (1) Knox Co (KDE/Nathan Klaus); 10 Sep (1) Greene Co (DHM); 1 ad & 1 im seen around the Chattanooga nest site thru end of season (Harold Sharp et al.). **Sora:** 25 Aug - 12 Oct (1+) Bra Lev (LAW, KAC et al.); 4 - 15 Oct (1-3) Greene Co (DHM); 25 Oct - 25 Nov (1-6) Ktn Stm Pl (Andrew Jones, JDJ et al.). **American Coot:** 15 Nov (2000) Cherokee L (KDE). **Sandhill Crane:** 21 Nov (8) Big South Fork (SJS), first there?; 22 Nov (809) Hiwassee Refuge, Meigs Co (KAC).

1998 Fall Hawkwatch, Soddy Mtn.(WGH et al.)
23 Aug - 29 Nov, 59 days

Black Vulture	62	Broad-winged Hawk	1512
Turkey Vulture	979	Red-tailed Hawk	282
Osprey	24	Golden Eagle	3
Bald Eagle	38	American Kestrel	38
Northern Harrier	21	Merlin	8
Sharp-shinned Hawk	476	Peregrine Falcon	4
Cooper's Hawk	39	unknown Accipiter	4
Red-shouldered Hawk	21	unknown Buteo	3

1041 vultures & 2474 hawks = 3515

Shorebirds: **Black-bellied Plover:** 19-23 Aug (1-2) Rkn Bot (KDE et al.). **American Golden Plover:** 23/28 Aug , 12 Sep (1) Ktn Stm Pl (KTOS/RDH, DM); 26 Sep (1) Limestone, Washington Co (Martha Dillenbeck, Charles Moore). **Willet:** 6 Sep (1) Rkn Bot (Fred Alsop et al.). **Marbled Godwit:** 20 Aug (1) Rkn Bot (KDE, DJT, Audrey Hoff, Roger Tankersly). **Sanderling:** 19 Aug - 6 Sep (1-5) Rkn Bot (KDE et al.). **Western Sandpiper:** 12/20 Aug (3/2) Ktn Stm Pl (KDE/John Moyle); 19 Aug - 6 Sep (1-12) Rkn Bot (KDE et al.); 24 Aug (1) Bledsoe Co (KAC); 27-28 Aug (5) Bra Lev (KAC, LAW). **White-rumped Sandpiper:** 12 Aug (1) Eagle Bend Fish Hatchery, Anderson Co (KDE); 23 Aug (1) Rkn Bot (KTOS). **Baird's Sandpiper:** 22 Aug (1) Ktn Stm Pl (KTOS); 24 Aug - 6 Sep (1) Rkn Bot (m.ob.); 26 Sep (1) Greene Co (DHM). **Pectoral Sandpiper:** 19 Aug (100+) Rkn Bot (KDE), max. **Dunlin:** 14 Oct (2) Greene Co (DHM); 25 Oct/1 Nov (1) Ktn Stm Pl (Andrew Jones, Audrey Mayer/KDE); 15 Nov (1) Boone L, Washington Co (RLK). **Stilt Sandpiper:** 9 Aug (1) Ktn Stm Pl (DJT et al.); 20 Aug - 6 Sep (1-5) Rkn Bot (KDE et al.). **Buff-breasted Sandpiper:** 20 Aug - 1 Sep (1-20) Rkn Bot (KTOS et al.), very high count for region. **Short-billed Dowitcher:** 24 Aug (1) Bra Lev (KAC). **Dowitcher sp.:** 19-30 Aug (1-20+) Rkn Bot (KDE et al.); 20 Aug (2) Ktn Stm Pl (John Moyle). **Common Snipe:** 26 Aug (2) Greene Co (DHM), ers. **Wilson's Phalarope:** 24 Aug/26-27 Sep (1/1) Tusculum/Mosheim, both Greene Co (DHM). **Red Phalarope:** 23/28 Aug (1) Rkn Bot (KTOS/Dick Peake). **Phalarope sp.:** 28 Aug (1) Rkn Bot (Dick Peake), possibly a second Red.

Gull-Hummingbird: Bonaparte's Gull: 22 Oct (3) Greene Co (DHM), ers. **Ring-billed Gull:** 9 Aug (1) Chick. L (KAC), ers; 18 Aug (15) Cherokee L (KDE). **Caspian Tern:** 9/16 Aug (1-2) Ktn Stm Pl (DJT et al.); 13 Aug (1) Kinser Park (JBH); 19-28 Aug (1-11) Rkn Bot (KDE et al.). **Forster's Tern:** 8 Aug (1) Kinser Park (DHM, JBH). **Eurasian Collared Dove:** 28 Sep/3 Nov (1/3) separate Chattanooga sites (KAC/Clyde Blum). **Black-billed Cuckoo:** 22 Aug (1) Ktn Stm Pl (KTOS). **Barn Owl:** 1 Aug - 15 Sep (1 ad, 3 yg) Jefferson Co (KDE); 14 Oct (1) Mohawk, Greene Co (DHM); 17 Oct (1) Sequatchie Co (Bonnie Johnson et al.). **Rufous Hummingbird:** 29 Oct - 8 Nov (1 im f) Bristol, VA (Janice Martin, JWC, RPL), measured but not banded. **Selasphorus sp.:** 12 Oct (1) Hmlt Co (LAW); 20-24 Nov (1) Hmlt Co (Janice Chadwell).

Shrike-Pipit: **Loggerhead Shrike:** thru period (2 ad, 3 yg) Jefferson Co (KDE). **Warbling Vireo:** 30 Aug (1) Knox Co (DJT, KDE, Roger Tankersly). **Philadelphia Vireo:** 27 Sep (1) Knox Co (KDE); 27-28 Sep (2) Hmlt Co (KAC). **Red-breasted Nuthatch:** 2 Oct (2) Hmlt Co (LAW, Mary Lynn Buttram), only report. **Brown-headed Nuthatch:** 30 Aug (1) Oak Ridge Reservation, Roane Co (James & Betty R. Campbell); 11 Nov (8) Ktn Stm Pl (JDJ), max there. **Brown Creeper:** 3 Oct (1) Hmlt Co (KAC), ers; 7 Nov (11) Big South Fork (SJS), max. **Winter Wren:** 10 Oct (1) Roane Co (JDJ), ers; 21 Nov (21) Big South Fork (SJS), max. **Sedge Wren:** 9 Aug (2) Kyker Bottoms, Blount Co (DJT et al.); 28/30 Sep (1) separate Hmlt Co sites (KAC). **Marsh Wren:** 27 Sep (1) Knox Co (KDE); 28 Sep (3) Bra Lev (KAC); 4-10 Oct (1) Greene Co (DHM); 11/25 Nov (1) Ktn Stm Pl (JDJ, Harriet Joslin). **Golden-crowned Kinglet:** 27 Sep (4)/7 Nov (115) Big South Fork (SJS), ers/max. **Hermit Thrush:** 1 Nov (17)

Big South Fork (SJS), max. **American Pipit:** 22 Nov (80+) Knox Co (RDH, DM et al.), max.

Warbler-Finch: **Golden-winged Warbler:** 7 Sep (5) Craven's House, Hmlt Co (LAW, Mary Lynn Buttram). **"Brewster's" Warbler:** 8-9 Aug (1) Ktn Stm Pl (DJT, KDE). **Orange-crowned Warbler:** 23 Sep (1) Knox Co (KDE); 3 Oct (1) Hmlt Co (KAC). **Yellow-rumped Warbler:** 25 Sep (1) Roane Co (JDJ), ers. **Blackburnian Warbler:** 18 Aug (1) Hmlt Co (KAC), ers. **Palm Warbler:** 27 Nov (1) Greene Co (DHM). **Bay-breasted Warbler:** 6 Sep (1) Big South Fork (SJS), ers. **Cerulean Warbler:** 24/30 Aug (1) Hmlt Co (KAC). Mourning Warbler: 8 Aug (1) Ktn Stm Pl (DJT, KDE), early. **Grasshopper Sparrow:** 16 Aug (nest w/3 yg) Ktn Stm Pl (DJT, RDH), late; 15 Oct (1) Greene Co (DHM); 29 Oct/22 Nov (1) Bra Lev (KAC), lrs. **Nelson's Sharp-tailed Sparrow:** 27 Sep (1) Mosheim, Greene Co (DHM). **Lincoln's Sparrow:** 10-30 Oct (1-2) Bra Lev (KAC et al.); 25 Oct (1) Ktn Stm Pl (JDJ). **Baltimore Oriole:** 19 Sep (1) Greene Co (DHM), lrs. **Purple Finch:** 28 Oct (1) Hmlt Co (Ken & Lil Dubke), ers.

Locations: Big South Fork - in Scott Co; Bra Lev - Brainerd Levee, Hamilton Co; Cherokee L - Grainger/Jefferson Co portion; Chick. L - Chickamauga Lake, Hamilton Co; Hmlt Co - Hamilton Co; Kinser Park - in Greene Co; Ktn Stm Pl - Kingston Steam Plant, Roane Co; Rkn Bot - Rankin Bottoms, Cocke Co; Soddy Mtn - in Hamilton Co.

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EASTERN MOUNTAIN REGION — Dry weather that began in July persisted throughout the entire fall season. Temperatures were a little above normal and remained warm through the end of the period. Observations in general were down for most groups of birds.

Eared Grebes returned to South Holston Lake for their fifth straight year, but they were much scarcer than in previous years. Perhaps the most notable sighting was of the region's first Western Tanager in Carter County. Numerous reports came in from Orchard Bog in Shady Valley, a recently restored bog habitat owned by The Nature Conservancy. George Mayfield, Jr. conducted his annual fall banding operation on Big Bald Mountain from September 3-23; the most numerous species banded there were Tennessee Warbler (720) and Black-throated Blue Warbler (244). Other notable bandings are included below.

Loon-Duck: **Common Loon:** 31 Aug (1) S. Hol. L. (JWC), ers; 8 Nov (8) S. Hol. L. (JBH et al.). **Eared Grebe:** 30 Aug (2) S. Hol. L. (MJE), ers; 26 Oct (1) S. Hol. L. (JWC); 2 Nov (1) Watauga L., Carter Co. (BKS, Howard Langridge). **Horned Grebe:** 31 Aug (1) S. Hol. L. (JWC), record early by 33 days locally & one of few Aug reports in state. **Double-crested Cormorant:** 31 Aug/3 Oct/7 Nov (1-5) S. Hol. L. (JWC). **Great Egret:** 2/30 Aug (6/5) S. Hol. L. (JWC/MJE). **Snowy Egret:** 2/26 Aug (1 im) S. Hol. L. (JWC/LCM). **Little Blue Heron:** 2/26 Aug (1 im) S. Hol. L. (JWC/LCM). **Black-crowned Night-heron:** 31 Aug (1 ad, 1 im) Watauga L., Carter Co. (BKS). **Blue-winged Teal:** 24 Aug (60+) Orchard Bog (JLS), record high count for Shady Valley.

Northern Shoveler: 26 Oct (4) S. Hol. L. (JWC). **Green-winged Teal:** 7 Nov (15) S. Hol. L. (JWC). **Hooded Merganser:** 30 Oct (1) Middlebrook L., Bristol (Kevin Hamed), ers. **Ruddy Duck:** 14 Nov (15) S. Hol. L. (BKS).

Eagle-Sapsucker: **Bald Eagle:** 23 Oct (2 ad, 1 im) S. Hol. L. (JWC et al.). **Virginia Rail:** 20 Oct (3) Orchard Bog (JLS). **Sora:** 17 Oct (2) Orchard Bog (JLS), first record for Shady Valley floor. **American Golden-Plover:** 14 Oct (1) S. Hol. L. (JWC), record late by 4 days locally. **Semipalmated Plover:** 2 Aug (1) S. Hol. L., VA side (JWC). **Bonaparte's Gull:** 7 Nov (6) S. Hol. L. (JWC). **Caspian Tern:** 20 Aug (2) S. Hol. L. (LCM). **Forster's Tern:** 30 Aug (10) S. Hol. L. (MJE). **Black Tern:** 24/30 Aug (7/12) S. Hol. L. (JWC/MJE). **Yellow-bellied Sapsucker:** 19 Sep (1 b) Big Bald Mtn (GRM et al.), ers.

Swallow-Siskin: **Tree Swallow:** 8 Nov (60+) S. Hol. L. (JBH et al.), late for that many. **Philadelphia Vireo:** 3-18 Sep (7 b) Big Bald Mtn (GRM et al.). **Red-breasted Nuthatch:** 19 Sep (1 b) Big Bald Mtn (GRM et al.). **Sedge Wren:** 2 Aug (1) Orchard Bog (JLS), first record for Shady Valley & earliest fall arrival for ne Tenn.; 11/20 Oct (2) Orchard Bog (JLS). **Marsh Wren:** 11 Oct (3) Orchard Bog (JLS). **Blue-gray Gnatcatcher:** 1 Nov (1) Erwin, Unicoi Co (BKS), late. **Blue-winged Warbler:** 15 Sep (1 b) Holston Valley (RPL). **Golden-winged Warbler:** 5/12 Sep (1 b/1 b) Holston Valley (RPL); 7/13 Sep (1 b/1 b) Big Bald Mtn (GRM et al.). **Orange-crowned Warbler:** 23 Sep (2 b) Big Bald Mtn (GRM et al.). **Nashville Warbler:** 9-23 Sep (14 b) Big Bald Mtn (GRM et al.); 12 Sep/4 Oct (1 b/1 b) Holston Valley (RPL). **Cape May Warbler:** 9-23 Sep (126 b) Big Bald Mtn (GRM et al.). **Black-throated Blue Warbler:** 3 Aug (1 b) Holston Valley (RPL), early fall dispersal at 1700 ft elevation. **Yellow-rumped Warbler:** 23 Sep (1 b) Big Bald Mtn (GRM et al.), ers. **Connecticut Warbler:** 26 Sep (1) Roan Mtn (Dee & John Eiklor). **WESTERN TANAGER:** 29 Sep (1 f) Hampton, Carter Co (BKS), good documentation submitted, first northeast Tenn. report. **American Tree Sparrow:** 23 Oct (1) Orchard Bog (JLS), exceptionally early. **Swamp Sparrow:** 4 Aug (1) Orchard Bog (JLS), apparently first state report in Aug. **Lincoln's Sparrow:** 20 Oct (2) Orchard Bog (JLS). **Snow Bunting:** 8 Nov (1) Round Bald, Roan Mtn (Ed Schell). **Bobolink:** 20 Oct/7 Nov (12/1) Orchard Bog (JLS), late. **Red Crossbill:** 28 Nov (9) Roan Mtn (RLK). **Pine Siskin:** 8 Oct (1) Shady Valley (JLS), last individual seen of a group that had been there since summer.

Locations: Big Bald Mtn - in Unicoi Co; Holston Valley - in Sullivan Co; Orchard Bog - in Shady Valley, Johnson Co; Roan Mtn - in Carter Co; S. Hol. L. - South Holston Lake, Sullivan Co.

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SCF - Sue C. Ferguson
GAF - Gilbert A. Foster
JF - Joe Francis
MAG - Mark A. Green
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SSH - Susan S. Hollyday
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NTOS - Nashville chapter TOS
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